FACULTY REFERENCE GROUPS AND STRUCTURAL INTERACTION TOWARD STUDENTS: A STUDY OF RELATIONSHIPS

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CHAPTER I

THE RESEARCH PROBLEM

Introduction

One of the most significant areas in the study of formal organizations has been the social relations of its members. Such investigations seem to have provided ample evidence that a person's attraction to various groups is one of the major determinants of his behavior. However, what sources of attraction are different for different types of persons, and how these attractions affect organizational behavior are still relatively unanswered by empirical investigation. The importance of understanding these relationships is appropriately expressed by the following passage:

> In order to understand what goes on in an individual, it is necessary to consider his attitude toward his fellow man. The relations of people to one another in part exist naturally, and as such are subject to change. In part they take the form of institutionalized relationships which arise from the natural ones. The institutionalized relationships can be observed especially in the political life of nations, in the formation of states, and in community affairs. Human psychological life cannot be understood without the simultaneous consideration of these coherences (Ansbacher, 1956, pp. 126-27).

Such is the nature of formal organization. Human conduct becomes socially organized; that is, the behavior of people becomes patterned into observable regularities that are due to the social conditions in which they find themselves. Blau and Scott state:

> The many social conditions that influence the conduct of people can be divided into two main types, which constitute the two basic aspects of social organization: (1) the structure of social relations in a group or larger collectivity of people, and (2) the shared beliefs and orientations that unite the members of the collectivity and guide their conduct (Blau and Scott, 1962, p. 2).

In short, the structure of social relations within the organization is an emergent element which influences the conduct of individuals.

This study focuses upon the teacher within the organization, his important social relations and their relationship to his behavior toward students.

Statement of Problem and Purpose

Our contemporary society is organized on the basis of an almost infinite variety of functioning social groups, of which each individual is simultaneously a member of a surprisingly large number (Hartley, 1957, p. 465). To understand the behavior of individuals, it is important to know which of the many available groups is the actual reference for the individual in any given situation. Thus, the problem becomes two-fold: (1) What are the major reference groups which influence the behavior of teachers? and (2) What are the ways in which these reference groups related to behavior toward students?

Specifically, the purpose of this study is to explore the relationship between choice of professional reference group and structural interactions toward students.

Definition of Terms

Terms Related to Professional Orientation

Reference group is defined as a group toward which an individual is oriented in terms of using the group's values and beliefs as standards for judgments. In this study, reference groups will be determined for two professional areas: teaching activities and professional specialization.

Acting as alternatives for reference group orientation are four selected categories:

1) Students: defined as students at place of employment.
2) Colleagues: defined as teaching colleagues at place of employment.
3) Administrators: defined as administrators at place of employment.
4) Professional Associates Elsewhere: defined as professional associates outside place of employment.

Orientation to these categories was measured by responses to the Professional Orientation Inventory designed specifically for this investigation.

Terms Related to Teacher Interaction

Interaction toward students refers to a teacher's mode of interaction toward students as opposed to his attitudes and feelings concerning students. These interactions are characterized by structure of interaction.

Structure of interaction encompasses the arrangement of social distance between students and teachers. The scale designates increasing degrees of closeness and is conceptualized along a continuum ranging from structurally close to structurally distant.

Structurally Close. The structurally close arrangement is characterized by a lack of social distance between teacher and students. They frequently have lunch or coffee together, participate in leisure time activity together, and interact on a first-name basis. There are frequent associations outside the educational setting.

Structurally Distant. The structurally distant arrangement is characterized by social distance between teacher and students. Place of interaction is primarily limited to the educational setting. Students are required to set appointments for conferences, and the teacher frequently takes the initiative in termination of conferences. The teacher tends to avoid interactions with students which are not educationally oriented.

This dimension was measured by faculty responses to the Teacher Interaction Inventory designed specifically for this investigation.

Operational Definitions

Structurally Close Interaction: A score above the median on the Teacher Interaction Inventory.

Structurally Distant Interaction: A score below the median on the Teacher Interaction Inventory.

Student Reference Group: A majority of responses in the "students" category on the Professional Orientation Inventory.

Non-Student Reference Group: A collective majority of responses other than "students" on the Professional Orientation Inventory.

Outer Reference Group: A majority of responses in the "Professional Associates Elsewhere" category on the Professional Orientation Inventory.

Inner Reference Group: A collective majority of responses other than "Professional Associates Elsewhere" on the Professional Orientation Inventory.

Significance of the Study

In the educational setting, the character of the relations between student and teacher is a basic concern and provides a fundamental dilemma. On the one hand, schools are bureaucratic, which implies that rationalized activities are necessary for their functioning. Yet at the same time, education tends to particularize student-teacher relations through the development of interpersonal bonds (Bidwell, 1965, p. 979). Thus, the variables which imping upon the nature of this relationship must, of necessity, become a primary concern.

From a theoretical point of view, "the bridge between individual dynamics and social behavior remains a tantalizing enigma. Elaborated speculation is not lacking in this area, but solid empirical data is almost invisible" (Hartley, 1957, pp. 44-45). The establishment of such empirical data demands the use of sound measures. Hyman states:

> Obviously, it would be far better to determine the reference group empirically than to make an assumption, no matter how reasonable, as to the reference groups people are likely to employ. We must move in the direction of simple but sound instruments for reference group measurement which can be applied routinely in surveys (Hyman, 1960, p. 390).

According to Hyman, the usefulness of any scientific term is dependent upon the degree to which it is precisely specified and translated into actual research procedures.

Thus, a primary significance of this study lies not only in the investigation of the relationship between teachers' reference groups and behavior toward students, but in the development of an empirical instrument to assess teacher attraction to selected reference groups. Furthermore, confirmation of the hypothesis will serve both practical and heuristic purposes.

Limitations

This study was intended to be an initial thrust into a previously unexplored area, consequently, results should be considered tentative, providing base data for more elaborate research. Generalizations drawn from the findings should be limited to the response population.

It should be noted that the Professional Orientation Inventory is a forced choice instrument which makes no allowances for reference groups other than those which the measure specifically identifies. Both instruments, the Professional Orientation Inventory and Teacher Interaction Inventory, were designed specifically for this research and are subject to the weaknesses of previously untested measures.

Lastly, the research is a predictive validity study and, as such, is useful for prediction purposes only. The reader should not imply causation from the results of this investigation.

Hypotheses

Hypothesis

H. 1. Choice of professional reference group (student, non-student) will be positively related to structural interactions with students.

Sub-Hypotheses

S. 1. Choice of professional reference group (student, non-student) with regard to teaching activities will be positively related to structural interactions with students.

S. 2. Choice of professional reference group (student, non-student) with regard to professional specialization will be positively related to structural interactions with students.

Research Questions

In addition to the above hypotheses, the following research questions were also under investigation:

Q. 1. Is choice of professional reference group (inner, outer) related to structural interactions with students?

Q. 2. Is choice of professional reference group (inner, outer) with regard to teaching activities related to structural interactions with students?

Q. 3. Is choice of professional reference group (inner, outer) with regard to professional specialization related to structural interactions with students?

CHAPTER II

RELATED LITERATURE AND RATIONALE

Introduction

The review of literature for this study centers primarily in the area of social psychology, specifically group process and reference group theory, and theory of role performance. The reader should, however, be aware that the literature presented does not constitute the only possible alternative to explain the relationships under consideration. Two other major areas, reinforcement theory and exchange theory, would also lend support to this investigation. The development of the literature precedes the rationale which culminates in the statement of hypotheses which guided the study.

Group Process

> If there is one truth that modern psychology has established, it is that an isolated individual is sick. He is sick in mind: he will exhibit disorders of behavior, emotion and thought; he may, as psychosomatic medicine teaches, be sick in body besides (Homans, 1950, p. 313).

To escape isolation, an individual must be able to become a member of a group; the group then helps to sustain the individual, but he cannot become a member unless he has some capacity for membership. Thus, a fundamental problem that concerns social psychologists is the

functioning of the individual in the group and, in turn, the effect of the group on the individual.

It has long been a common observation that people seem to behave differently within groups than when they are acting as individuals. Many experimental investigations have confirmed the "group mind" theory that operates when a number of people act together. Dasheill's (1930) study examined the effects of varying social situations on the productivity of individuals. He structured three tasks: multiplication of two-place numbers by two-place numbers, an analogy test and free serial word associations. He then made intercomparisons between the individual's achievements when working in four situations: working alone, working together non-competitively, in rivalry, and under observation. The data indicated that the effect of observation is to increase speed at the expense of accuracy. Results concerning the effect of co-workers were not clear, but the rivalry condition had an effect separate from either co-workers or spectators. Additionally, when working alone, different social attitudes affect performance in different ways.

A notable study in this regard is Muzafer Sherif's 1935 research of the autokenetic phenomenon. In this experiment subjects established their own range and anchorage point when asked how far a point of light moved against a background of total darkness. Subjects tended to adhere to their perceptions as long as they were alone. However, when judgments were made in a group situation, a new range and a new anchorage point emerged about which judgments of the individuals clustered.

Such studies tend to confirm the notion that the group is not merely an aggregation of individuals, that in fact a difference does exist between the performance of the individual alone and the individual in a

group. However, such investigations do not address themselves to the dynamics of interrelationships, the nature of the changes in the individual as a result of his identification with the group. The basic question becomes: Is identification with a group connected with ability to communicate with other group members and with sharing of expectations and values? Richard Centers, in a study concerned with group identification and common frames of reference, demonstrated the connection in 1949. Using a measure of social class identification and a measure of conservative-radical orientation, he found that we identify ourselves with those groups that share our frame of reference, in other words, whose norms (values and expectations) we share. Additionally, he concluded that attitudes varied with class identification, rather than with class placement by objective indices, thus hinting that reference group rather than membership may be the more salient aspect in determining behavior.

A study by Steiner (1948) asked high school boys, through unobtrusive measures, to identify themselves in a particular class: middle class, working class, and the like. Analysis showed that they identified themselves with a class on the basis of how they looked at things rather than on material criterion. He concluded that when an individual identifies with a group, self-estimate includes his opinion of the group, and his reaction to opinions about the group are as though they were personal judgments of himself.

Once accepted, norms that guide human behavior are frequently retained even after the conditions originally responsible for conduct have disappeared. Newcomb's Bennington College Study is an example of the influence of identity group and conformity to a social norm. The

investigation studied the changes in the political-economic progressiveism of girls during successive years of attendance at college. Information concerning reference groups was obtained both directly and indirectly. Political inclination was measured by Likert-type scale labeled Political and Economic Progressiveism. Findings showed that scores on the scale changed in a consistently more liberal direction with greater length of time in college. The interesting point is that those girls who resisted the attitude change through the prevailing social pressure maintained identification with off-campus reference groups which provided support for their views.

The same tendencies were pointed out in the Sherif and Cantril discussion of the functioning of gangs. Their summary stated that "group norms may become so well incorporated as personal ego-attitudes that individual group members will observe them at the cost of personal punishment and hardship" (Sherif and Cantril, 1947, p. 321).

In regard to the strength of social norms, Etzioni makes the theoretical point that "once a group takes a position toward the organization, the more peer-cohesive it is, the more powerful it is likely to be in inducing individual members to take their position" (Etzioni, 1961, p. 179). He goes on to suggest that cohesion (a positive expressive relationship among two or more actors) merely acts as a channel for any kind of normative content, that the substance communicated is not determined by the cohesion. Which norm is chosen depends upon the prior characteristics of the members as well as external conditions, not upon the degree of peer-cohesion. Identification with a particular group creates the need for approval, and this is satisfied when behavior

conforms to group norms. Thus, the individual is under pressure to guide his behavior to conform to the norms the group enforces.

Reference group theory would applaud such a position, but be quick to add that the normative content which guides individual conduct is determined by the individual's referent group rather than by his membership group. According to social psychology, at the basis of our society is an infinite number of social groups with which the individual is simultaneously associated, and to fully understand human behavior, we must identify which groups are the actual reference for an individual in a given situation.

Membership and Reference Groups

> In general, reference group theory aims to systematize the determinants and consequences of those processes of evaluation and self-appraisal in which the individual takes the values and standards of other individuals as a comparative frame of reference (Merton and Rossi, 1949, p. 35).

The reference group concept reminds us that individuals may orient themselves to groups other than their own, not merely to their membership group, and thereby explains why the attitudes and behavior of individuals may deviate from what would be predicted on the basis of their membership group (Hyman, 1960; Sherif, 1948; Newcomb, 1950). Thus, it seems that an individual's organizational behavior, his relationships with his immediate surroundings, cannot be fully understood until the individual's orientation is fully examined.

The term "reference group" was first coined by Herbert H. Hyman in 1942. His investigation delved into why individuals seemed to rank themselves according to their choice of social framework, and then attempted to tap the consequences of particular reference groups on

self-appraisal. This first systematic study provided the initial thrust in the area of reference group theory. Further development and research led to what social psychologists have termed normative and comparative functions of reference groups. Kelley (1947) defined these functions as setting standards and enforcing standards, and serving as or being a standard or comparison point against which a person can evaluate himself and others. He recognized that an individual's attitudes are related or anchored in various social groups, and that an individual's expressions are influenced by the commonly expressed norms within the groups to which he belongs. Yet, he was also aware that attitudes are often influenced by non-membership groups.

In 1954, Eisenstadt addressed himself to a fundamental question: "When are groups the main reference points according to which a person evaluates himself and orders his behavior?" (Eisenstadt, 1954, p. 206). His study was based on an analysis of previous studies and data obtained from four hundred randomly sampled cases. On the basis of his data and research, he presented the following tentative answers to the above question.

> A. Specific groups may become the main reference points of our individual in so far as they become the symbol of a given norm or value. This may take place (1) if the leaders, formal or informal, seem to emphasize and symbolize some group and/or (2) when the effectiveness of a given reference norm is largely dependent on the maintenance of a solidarity, best evoked through some sort of a group identification; and/or (3) if some specific group has acquired such symbolic importance in the individual's process of socialization.
>
> B. A group may become the main reference point for an individual if he has aspirations to become a member of it, and if it is in the direction of his mobility aspirations or role-choices. In all such cases, the group becomes the main focus of an individual's reference-norms and value orientations or one of their most important aspects. But only very rarely ... does one group become the focus of all values of aspiration (Eisenstadt, 1954, p. 206).

Thus, the inconsistency in behavior as a person moves from one environment to another may be reflected in terms of differing reference groups.

According to Shibutani (1955), in the analysis of man's behavior, determining which perspectives he uses, and what group provides the necessary support for his position is the crucial problem. In other words, identifying the group whose perspective (norms) constitute the frame of reference for an individual is essential to understanding his behavior. Perspectives are subject to change, and each situation is different. However, it is the confirming responses of other people that provide support for perspectives. The problem is to determine whose (what group or individual) supportive reaction will sustain a given point of view.

The question of relevance of a particular group becomes somewhat important when attempting to determine which groups most influence the conduct of individuals. According to Turner (1955), when the saliency of groups is either too high or too low, the group will not be used as a comparison point. This position is supported by Festinger et al (1954), whose theory of social comparison suggests that an individual selects groups which are near his own ability.

Research in the area of selection of normative reference groups is not plentiful. Experimental work (Patchens, 1958; Charters, 1968; Kelley, 1955) suggests that situational factors, such as size of group, common affiliations, and satisfaction with group, are likely to influence the saliency of a membership group, thereby increasing or decreasing the possibility of acceptance of the perceived norms. However, the long term influence of such factors is still open for question (Hyman, 1968, p. 15).

Hartley (1957) delved into the psychological factors which influence the choice of membership group as a reference group. Specifically, he hypothesized that:

> Acceptance of the college as a reference group would be (a) positively related to ease of interpersonal contacts and authoritarian submission; and (b) negatively related to sense of victimization, cynicism and lack of self-confidence (Hartley, 1957, p. 47).

The sample consisted of seventy-three male students from five freshman orientation courses. Variables were measured by instruments designed specifically for the study. Correlation analysis of data supported the first hypothesis but rejected the second. Interpretation of the study suggests that a particular group will be accepted as a reference group if it is perceived as meeting some personal needs, and if there is perceived congruence between individual values and group values.

An interesting study by Schachter (1951) investigated what would happen when the group's influence fails. A small number of groups were set up in which social approval could be manipulated. At the end of the experiment, two tests designed to reveal the degree of social approval each one accorded to the others were administered. Both measures yielded similar results. The deviates in the different groups received fewer sociometric choices, and members were apt to suggest they be omitted from future meetings. Thus, the amount of social approval (reinforcement given by the group) is a variable that influences whether an individual will be accepted or rejected. As Homans writes, "men give social approval, as a generalized reinforcer, to others that have given them activity they value, and so make it more likely that the others will go on giving the activity" (Homans, 1961, p. 129).

In regard to consequences of identification with a particular group, the previously cited Bennington Study showed that, over time, attitudes may change in accordance with the prevailing norms. Three factors were cited as mediating the change process: (1) identification with group; (2) norm awareness; and (3) supporting or conflicting identifications with other groups. Converse and Combell (1953) delineated a similar list of conditions which facilitate behavior in accordance with norms of reference groups. Theirs include: (1) strength and clarity of norms; and (2) beliefs concerning the appropriateness of behavior. Newcomb's later, long-range study (1963) concerning the persistence and regression of attitudes supports these earlier findings. Specifically, he states:

> Support from important people concerning important issues comes to be the rule, and its absence the exception. Support sometimes comes about by changing our own attitude toward those of needed supporters, or, more commonly, by selecting supporters for existing attitudes ... in which case we can say that the attitude has been expressed by finding a supportive environment (Newcomb, 1963, p. 13).

His summary indicates an attitude can be supported in two ways: one, by selecting an environment which excludes new information, or two, by selecting an environment which supports his own information. In other words, when the environment excludes opposing information or provides reinforcing information, the attitude persists.

A 1962 study by Hyman et al, supports the thesis that reference groups act as a major influence in attitude change. The research was a longitudinal investigation of the attitude changes which occurred during summer training programs of the Encampment for Citizenship, a six week program designed specifically to prepare students for responsible citizenship and democratic action. A measure of liberal attitudes was

administered prior to encampment, six weeks following encampment and four years later. Additionally specific indices were utilized to determine, over time, the degree of face to face contact or isolation among participants. The evidence showed that the original reference group need not be present to reinforce attitude maintenance, yet when attitudes are verbalized, support from the reference group is important.

When attitudes are converted to action, which group is the most powerful in regard to behavior, reference groups or membership groups? A classic field study was conducted in this regard by Siegel and Siegel (1957). The investigation was an examination of attitude changes over time when membership and reference groups are identical and when they are different. The sample consisted of women students at a large university. All subjects shared a common reference group at the start of the period under study. Divergent membership groups with differing attitude norms were then socially imposed on the basis of a random event. Results indicated that longitudinal attitude change is related to the group identification of the persons, both membership and reference group. The greatest attitude change came about in the subjects who accepted the imposed membership group as a reference group. Thus, both groups are influential in determining behavior, and the most potent arrangement is when membership and reference group coincide. There appears no clear answer, beyond the assumption that both are influential, as to which is the most powerful in determining behavior.

Jackson's work (1959), in the area of reference group process in a formal organization, yielded somewhat similar results. His thinking is summarized in four hypotheses which he tested empirically:

> 1. In any group or organization, a person's attraction to membership will be directly related to the magnitude of his social worth.
>
> 2. The magnitude of the positive relationship hypothesized in (1) will vary directly with the volume of interaction the person has with other members of the group or organization under consideration.
>
> 3. Where alternative group orientations are possible for a person, his relative attraction to membership in one or another group will be directly related to his relative social worth in the groups considered.
>
> 4. The magnitude of the positive relationship hypothesized in (3) will vary directly with the volume of interaction the person has with other members of the groups under consideration (Jackson, 1959, p. 309).

The population consisted of all seventy-two staff members of a child welfare agency. The design included three phases. The first step utilized a questionnaire to determine each person's actual work group affiliation. One month later, a personal contact checklist was completed. Finally, two months following the original questionnaire, a measure was used to obtain data concerning each individual's social worth and his attraction to both his work group and to the total organization. The results support the hypotheses and the assumptions from which they were constructed. Specifically:

> ... that individuals attempt to maximize personal gratification and minimize deprivation in their social interaction; that the prestige system of the group or organization generates evaluative symbols that are transmitted in face-to-face contact; and that a person's level of gratification is directly related to the character of the evaluative signs he receives in his interaction with others (Jackson, 1959, p. 324).

Finally, Jackson observed that reference group processes seemed to occur with special strength in face-to-face groups where interactions and expectations are clear, where behavior is exposed, and compliance and contributions are readily evaluated.

Blau and Scott's (1961) study of the significance of a professional reference group, in a county welfare agency, lends support to the thesis that the reference group is instrumental in determining behavior toward others. Specifically, he hypothesized that "a commitment to professional standards would make workers more critical of agency practice and less apt to conform to established administrative practices" (Blau and Scott, 1961, p. 72). Results confirmed the hypothesis and showed that the professional orientation was related to criticism of organizational policies which directly affected service to clients.

In the same study, their data on client acceptance and individual orientation showed that members of cohesive groups (measured by friendship choices) were less apt to react in personal terms to client behavior. Approximately seventy percent of those in cohesive groups reported impersonal reaction toward clients, whereas only about twenty-five percent of the members of low cohesive groups reported impersonal reactions. Their interpretation is that

> ... in the absence of such peer-group support, the caseworker's relations with his clients tend to become an important source of ego support for him, and his resulting dependence on clients leads him to react to them in personal terms (Blau and Scott, 1961, pp. 107-108).

In sum, "it is an individual's reference groups, rather than his membership groups that supply the norms that guide his behavior" (Hartley, 1958, p. 280).

Role Performance

It has been shown that man seeks social contacts and that these contacts, to a certain extent, are influential in determining human

conduct. We must now focus upon the individual and relationships among individuals in a social system, specifically their role performances and behavior patterns.

Getzels and Guba (1957) conceptualized a theory of organizational behavior involving two classes of phenomena which they considered independent but interactive. First, there are institutions with requisite roles and expectations that serve to fulfill the organizational goals. Secondly, there are individuals within the social system with personalities and need-dispositions whose interactions constitute what they term "social behavior." Their assertion is that social behavior may be viewed as the mutual interaction of these two dimensions. Institution, role, and role expectations taken together constitute the nomothetic dimension; and individual, personality, and need-disposition make up the idiographic or personal dimension of activity in a social system. The general pictorial model is represented in Figure 1.

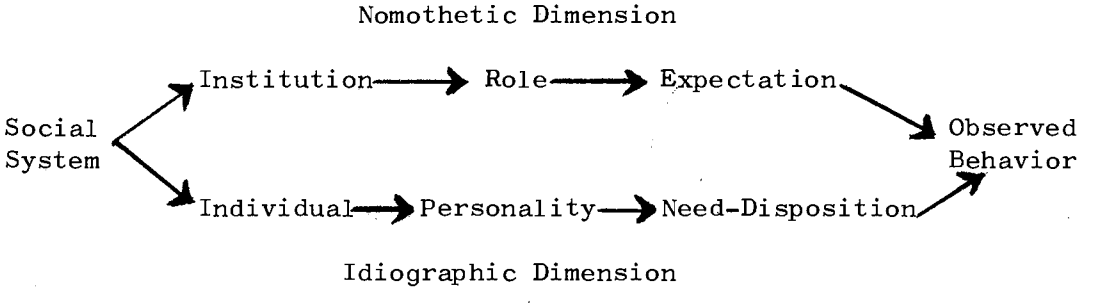

Figure 1. The Nomothetic and Idiographic Dimensions of Social Behavior

To understand the behavior of individuals within an institution, both the role expectation and need-disposition must be known. Needs and expectations are conceived of as motives for behavior; one stemming from personal propensities, the other from institutional obligations. Thus, the social system is defined by the integral parts of the dimensions, each term being the analytic unit for the one preceding it.

Under this conceptualization, social behavior is described as follows:

> Social behavior results as the individual attempts to cope with an environment composed of patterns of expectations for his behavior in ways consistent with his own independent pattern of needs (Getzels, 1957, p. 429).

In other words, observed behavior is a function of both institutional role and the personality of a particular role incumbent.

Max Abbott (1965) carried the theory one step further. In addition to focusing on the structure and the individual, he analyzed intervening variables (social forces) which mediate between structure and personality, and goal-directed behavior. Characteristic of his conception of a social system is that roles do not represent a single set of behavioral expectations. On the contrary, the social system consists of an array of roles associated with each status. This array of roles is referred to as "role-set" and is defined as "the plurality of expectations which become associated with a single status" (Abbott, 1965, p. 3).

> ... the role set is characterized by various expectations which are held for a single role or position within the organization. For example, the role of teacher in the educational institution may be subject to expectations which are held by such diverse groups as <u>pupils</u>, <u>colleagues</u>, <u>administrators</u>, <u>the Board of Education</u>,

> Parent-Teachers' Associations, and professional teachers' associations (Abbott, 1965, p. 3).*

Conflicts that arise from the role-set are seen as significant for the organization. The differing norms that constitute the role-set produce an array of conflicts and tensions which act to impinge upon the performance of the individual, diverting attention from goal oriented behavior.

Over time, the formal organization sanctions certain expectations connected with the role-set which are consistent and related to the organizational goals. This limited set of expectations comes to represent the organization's codified behavior system. However, each individual's needs and values regulate the extent to which expectations are emphasized or de-emphasized from the available field. Thus, each person is conceived as functioning in two situations, the codified behavior system and his own concept of roles. Under Abbott's conception, the interaction of these two situations constitute the individual's cognitive orientation to roles.

As the individual arrives at a perception of his role in the organization, he also has feelings and attitudes regarding his role. Thus, according to Abbott, he acquires an affective response to roles (motivation).

Since the individual's affective response and cognitive response to roles is dynamic, he needs continual feedback to re-assess his organizational behavior at any given time. According to Abbott, these mechanisms are the reward systems and the reference-group norms. Thus the individual's perceptions of the appropriateness of behavior can be

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*Underscoring added.

continually evaluated in terms of its congruence with the codified behavior system.

Abbott's model for organizational behavior is represented pictorially in Figure 2.

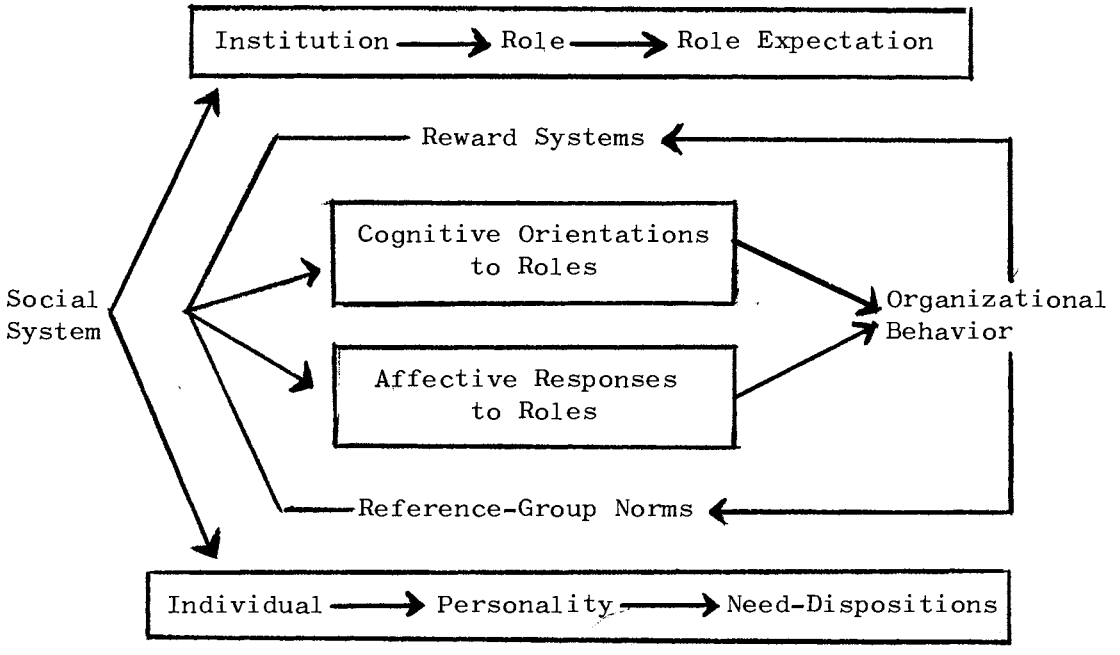

Figure 2. Intervening Variables in Organizational Behavior

The basic thesis of Abbott's theory was essentially synonymous with the orientation of this research:

> ... that each individual within an organization makes his own decisions regarding his behavior, but that those decisions are influenced by a number of forces which determine his perceptions of the situation (Abbott, 1965, p. 10).

An examination of an investigation by Moment and Zeleznik (1964) characterizes what is meant by behavioral patterns. The study analyzed

the role performances of middle and upper level managers in experimental problem-solving groups. Participants' post-meeting evaluations and perceptions of each other were identified and classed into a four-fold typology. The categories were technical specialists, social specialists, stars, and unchosen. Ten measures of individual behavior were utilized; half were concerned with group task and maintenances requirements, and the other half were concerned with management of aggression and exchange of sentiments among individuals.

The behavior patterns were consistent with the perception patterns upon which the typology was based.

> Social Specialists were socially supportive and emotionally expressive. They tended to avoid criticizing or disagreeing ...
>
> The Technical Specialists were relatively quiet and withdrawn, but elaborative when they did speak ...
>
> The Stars' behavior pattern featured neither avoidance nor excesses in their task and social behavior ...
>
> The Unchosen participants' behavior was aggressive, hostile, and self-oriented ... (Zeleznik, 1964, p. 192).

Consequently, in certain situations, particular behavior patterns emerge and are perceived by others as role performances.

Probably the most well known studies which tap the influence of reference group norms on individual behavior were conducted at the Hawthorne plant of the Western Electric Company. Looking at the group as a whole, Roethlisberger and Dickson concluded that the men of the bank-wiring observation room adopted a codified pattern. In reporting on the behavior of the men, Homans describes the most salient features of the code as follows:

> 1. You should not turn out too much work. If you do, you are a "rate-buster."
> 2. You should not turn out too little work. If you do, you are a "chiseler."

> 3. You should not tell a supervisor anything that will react to the detriment of an associate. If you do, you are a "squealer."
> 4. You should not attempt to maintain social distance or act officious. If you are an inspector, for example, you should not act like one (Homans, 1950, p. 79).

Thus, the internal reference group established standards which acted to order individual performances.

As previously established, an individual may be influenced by reference groups both within and outside the organization. Gouldner (1957) addressed himself to this very fact. The findings presented are the results of an in-depth study of a private liberal arts college with approximately one thousand students and one hundred fifty faculty. He initially concluded that two basic latent identities can be identified:

> 1. Cosmopolitan: those low on loyalty to the employing organization, high on commitment to specialized role skills, and likely to use an outer reference group orientation.
> 2. Locals: those high on loyalty to the employing organization, low on commitment to specialized role skills, and likely to use an inner reference group orientation (Gouldner, 1957, p. 290).

As Gouldner continued to analyze these basic concepts, it occurred to him that there might be different kinds of cosmopolitans as well as different kinds of locals. Utilizing factor analysis on his original data, he isolated six factors which are interpretable.

> The Dedicated: Theirs is an inner reference group, focusing on the college and its distinctively embodied values.
> The True Bureaucrat: They are distinguished by their orientation to the town in which their organization is located ... Their concern for outside criticism leads them to seek changes in the traditional institutions and values of the organization.
> The Homeguard: They are people whose personal history is intimately interwoven with the organization ... indications are that they use an inner reference group rather than an outer reference group orientation.
> The Elders: ... their reference orientation may be distinguished not only by a special reference group, other

> elders, but by a concern about a special or earlier time period.
> The Outsiders: ... they tend to be oriented toward an outer reference group, feeling for example that they do not get adequate intellectual stimulation from their colleagues and that they get more intellectual stimulation from colleagues elsewhere.
> The Empire Builders: Their commitment is to their specialized role and to their specific academic departments ... they are integrated into the college structure, but primarily into its formal organization (Gouldner, 1957, pp. 446-50).

Gouldner was able to show that the various degrees of cosmopolitans and locals have different degrees of influence and participation in the organization, as well as different patterns of informal social relations.

Lipham and Francke's 1966 study of the non-verbal behavior of administrators provides a slightly different view of role performance. Structured interviews were conducted with forty-two school principals. Previous to the interviews, the principals had been classified by their peers as either promotable or non-promotable. Similarly, a sample of naval executives were classified as innovators and non-innovators. Both groups were then analyzed on the basis of the following taxonomy:

> 1. Structuring of Self: includes such variables as self-maintenance, clothing, physical movement and posture.
> 2. Structuring of Interaction: includes such variables as greeting of others, placement of others, interaction distance and interaction termination (Lipham and Francke, 1966, p. 103).

Promotables and innovators were found to differ significantly from non-promotables and non-innovators. Promotables and innovators both greeted visitors at or near the door, conversely, non-promotables and non-innovators tend to remain behind their desks greeting visitors only verbally. Similarly, promotables and innovators tended to reduce social distance by positioning the visitors along side the desk rather than across it. Likewise, promotables and innovators were more cognizant of

physical discomforts such as lighting and temperature. Almost always, promotables extended offers of lunch, coffee, or a tour of the facilities. Non-promotables tended to rarely demonstrate these behaviors.

With regard to structure of the environment, the evidence indicated that promotables and innovators tended to display more personal items such as photographs, paintings and figurines. Conversely, the offices of non-promotables and non-innovators reflected fewer personal items; they largely included more conventional items such as calendars, notices, plaques, and flags. Finally, promotables, as opposed to non-promotables, tended to attach less significance to the use of door or desk name plates as status symbols.

By their own admission, Lipham and Francke have reservations regarding both the methodology and the findings of the research. However, they contend that "attention should be focused on an analysis of how the behaviors of a given role incumbent vary systematically according to those significant others with whom he is interacting" (Lipham and Francke, 1966, p. 107).

Thus, the behavioral patterns of individuals may include a broad spectrum of behavior. The pattern or style of behavior employed by individuals reflects the unique way each chooses to cope with an environment composed of varied patterns of expectations and impingements. Within his perceptual field, an individual's reference group(s) act as an anchor which serve as standards for judgment and conduct, as well as social support for living up to these standards.

Rationale

Research has verified that man does not act alone, but is influenced by his associations in groups and that the rules of conduct which guide his behavior are the rules or norms that are sustained and supported by members of the groups with which the individual identifies (Sherif, 1935; Steiner, 1948; Hartley, 1957; Centers, 1949). In other words,

> ... the network of social relations transforms an aggregate of individuals into a group, and the group is more than the sum of the individuals composing it, since the structure of social relations is an emergent element that influences the conduct of individuals (Blau and Scott, 1962, p. 3).

Additionally, it has been shown that these identified-with groups, these reference groups, are not necessarily the individual's membership groups. Hartley states "it is an individual's reference groups, rather than his membership groups, that supply the norms that guide his behavior."

With regard to behavior within a formal organization, Abbott theorizes:

> A formal organization may be viewed as a specific social system in which role expectations become formalized and institutionalized. Such expectations constitute a codified behavior system, ... as specific individuals, with their own patterns of organizationally relevant needs, are socialized in respect to the organization's codified behavior system, they achieve a cognative orientation to roles and they respond affectively to this orientation. Thus, behavior ... is conceived as deriving simultaneously from an individual's cognative orientation to roles and his affective responses to roles ... Both the cognative orientation to roles and affective responses to roles are modified over time, largely as a function of two feedback mechanisms ... the reward system and the reference-group norms (Abbott, 1965, pp. 12-13).

Thus, each individual within an organization makes his own decisions regarding his own behavior, but these decisions are influenced by a number

of forces including the individual's reference group. Consequently, as people conform closely to the expectations of their reference group, the group functions to provide standards of judgment and conduct, as well as social support for meeting these standards. Conversely, as one deviates from the common expectations, social sanctions are used to discourage violations of these norms.

Thus, it would seem that individuals with differing reference groups will exhibit differing role performances. Further, it seems reasonable to assume that an individual desiring support from his reference group will establish a more personal relationship with reference group members than with non-reference group members.

Predictions

Based on the foregoing review of literature and rationale, the researcher expected the following structure of interaction between teachers and students: Teachers who utilize students as a professional reference group will interact more closely with students than teachers who utilize other professional reference groups. Their interactions with students will be characterized by structural closeness, a lack of social distance between teachers and students.

Hypotheses

To test the above expectation empirically, the following hypotheses were derived for statistical treatment:

H. 1. Choice of professional reference group (student, non-student) will be positively related to structural interactions with students.

Sub-Hypotheses

S. H. 1. Choice of professional reference group (student, non-student) with regard to teaching activities will be positively related to structural interactions with students.

S. H. 2. Choice of professional reference group (student, non-student) with regard to professional specialization will be positively related to structural interactions with students.

Research Questions

In addition of the above hypotheses, the following research questions were also under investigation:

1) Is choice of professional reference group (inner, outer) related to structural interactions with students?

2) Is choice of professional reference group (inner, outer) with regard to teaching activities related to structural interactions with students?

3) Is choice of professional reference group (inner, outer) with regard to professional specialization related to structural interactions with students?

CHAPTER III

RESEARCH DESIGN

Introduction

> Research design sets the framework for "adequate" tests of relations among variables. Design tells us, in a sense, what observations to make, how to make them, and how to analyze the quantative representations of the observations (Kerlinger, 1964, p. 276).

Chapter III specifies the directions for observation-making and analysis followed in this research. Specifically, it describes the development of instrumentation, sampling technique, administration procedures, and a description of the statistical treatment of data.

Instrument Selection

A critical problem in this research was the identification of instruments which would operationalize the unique variables under consideration. An extensive examination of the literature revealed no measures which tapped the orientation of teachers to the secondary reference groups under consideration. However, existing instruments, such as one developed by Melikian and Diab (1959), which measures the strength of attachment to one of a series of possible normative reference groups through forced-choice items, do set precedence for the development of such an instrument. Consequently, it was decided to construct a forced-choice instrument which would allow the researcher

to classify faculty members with regard to their orientation to certain selected secondary reference groups.

A similar search conducted to isolate instruments which operationalized the dependent variable, structure of interactions toward students, was equally unproductive. Consequently, it was decided to construct the operational measure of this concept.

Development of the Professional Orientation Inventory

The development of the Professional Orientation Inventory as an instrument for determining reference groups followed three phases. Phase one was concerned with a comprehensive review of the literature in order to determine the theoretical framework for the instrument. This review resulted in the generation of six basic reference categories which seemed to encompass the broad areas with which the investigator was concerned: (1) Students; (2) Teaching Colleagues; (3) Administration at Place of Employment; (4) Professional Associates Outside Place of Employment; (5) Professional Organizations; and (6) Community Organizations. For the purposes of this investigation, the author opted to consider only the first four categories, considering them to have the most organizational relevance.

Following this, the author generated thirty open-ended items designed to operationalize the concept reference group as defined in Chapter I. The items were intended to tap a broad spectrum of professional behavior, with the reference categories acting as alternatives for orientation in terms of using the group's values and beliefs as standards for professional judgments.

Phase two of the instrument construction was the conduct of two pilot studies. The thirty-item instrument was administered to a doctoral seminar class of twenty students. Respondents were asked to complete the instrument and to comment on the clarity and applicability of the items. The pilot resulted in a complete revision of the instrument format and items. The revised instrument was then piloted at two universities in the midwest. Thirty-seven of a possible forty instruments were returned from the second pilot.

The objective of the second pilot study was to determine the dimensionality of the items. This objective pointed to the use of factor analysis* as a method of determining the number of underlying dimensions tapped within the instrument. The raw score data were fed into the BMDX 72 factor analytic program at the Oklahoma State University Computer Center. The results appear in Table I.

An analysis of the factor analytic program verifies the existence of a single underlying factor as empirically existing within the instrument. The consistently high factor loadings lead to the assumption that all thirty items have a common factor through which the scores of an individual can be represented in terms of a single factor.

Having established the unidimensionality of the original items, the researcher subjected the instrument to item analysis and a test of

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*Factor analysis is an advanced correlational technique, and as such, requires a level of measurement commensurate to the statistic. To meet this criteria, the Professional Orientation Inventory items were arbitrarily assigned a value of one to four corresponding to the four categorical response sets; thus producing a continuous measure. This procedure violates scientifically pure research practices. However, the researcher felt that if consistently followed throughout the investigation, the violation would have no appreciable influence.

TABLE I

FACTOR LOADINGS: PROFESSIONAL ORIENTATION INVENTORY

Variables	Factors I	II	III	IV
1	0.94			
2	0.89			
3	0.91			
4	0.89			
5	0.94			
6	0.89			
7	0.94			
8	0.96			
9	0.94			
10	0.95			
11	0.93			
12	0.90			
13	0.90			
14	0.95			
15	0.89			
16	0.95			
17	0.89			
18	0.96			
19	0.93			
20	0.94			
21	0.95			
22	0.91			
23	0.96			
24	0.88			
25	0.95			
26	0.95			
27	0.96			
28	0.96			
29	0.94			
30	0.98			
Factor Variance	87.76%	1.86%	1.63%	1.15%
Cumulative Total Variance	87.76%	89.62%	91.25%	92.40%

relevancy. The criteria for relevancy was that the nature of the item, by its content, did not exclude one or more of the possible reference categories as a response. The purpose of item analysis was to eliminate those items which did not elicit different responses, that is to say, those items which do not discriminate between individuals. These procedures eliminated twelve of the original thirty items from the instrument. After this revision, the remaining eighteen items were again factor analyzed.

The purpose of the second factor analysis was to determine changes, if any, in the factorial structure of the final instrument. The results appear as Table II.

TABLE II

FACTOR LOADINGS: PROFESSIONAL ORIENTATION INVENTORY

Variables	Factors			
	I	II	III	IV
1	0.93			
2	0.90			
3	0.89			
4	0.90			
5	0.96			
6	0.91			
7	0.91			
8	0.90			
9	0.95			
10	0.89			
11	0.94			
12	0.95			
13	0.92			
14	0.95			
15	0.89			
16	0.95			
17	0.96			
18	0.94			
Factor Variance	86.37%	2.57%	2.34%	1.62%
Cumulative Total Variance	86.37%	88.94%	91.28%	92.80%

Inspection of the data revealed no substantial alternation of the factorial structure, confirming the existance of unidimensionality found in the initial factor analysis. This unidimensionality, coupled with the consistently high factorial loadings, leads to an assumption of construct validity for the Professional Orientation Inventory.

Phase three involved an overall content analysis of the final items. Although factor analysis indicated a unidimensional structure, an examination of the items revealed two distinct content groups, justifying the determination of two sub-scale scores as well as a total scale score for the instrument. Variables 1, 5, 9, 11, 12, 14, 16, 17, and 18 tapped professional orientation related to professional specialization. Variables 2, 3, 4, 6, 7, 8, 10, 13, and 15 measured professional orientation related to teaching activities.

Scoring the Professional Orientation Inventory

The Professional Orientation Inventory yields nominal data. Responses in each reference group category are tallied vertically for each sub-scale and the total scale. The category receiving a plurality of tallies is designated as the reference group, and the respondent is classified accordingly. In order to test the major hypothesis under investigation, three of the four classifications: colleagues, administrators, and professional associates outside place of employment, were collapsed into one category. This resulted in two viable categories, student and non-student reference groups, each requiring a majority of the responses to be designated as the reference group.

To test the research questions under consideration, three classifications, students, colleagues, and administrators, were collapsed into

one category. This resulted in two viable categories, inner and outer reference groups, each requiring a majority of the responses to be designated as a reference group.

A copy of the instrument, with additional scoring information, appears as Appendix A.

Development of the Teacher Interaction Inventory

The development of the Teacher Interaction Inventory as an instrument for measuring the structure of interactions between faculty and students followed four phases. Phase one was concerned with identifying alternative methodologies for constructing the instrument. A review of literature revealed three basic procedures which were viewed as potentially appropriate: Thurston-type scales, Gutman-type scales, and Likert-type scales. Of these, the Likert-type seemed to be the most appropriate. Kerlinger (1964) writes that

> ... of the three types of scales, the summated rating scale seems to be the most useful in behavioral research, that it is easier to develop, and yields about the same results as the more laboriously constructed equal-appearing interval scale ... It should be noted that the method can be improved and altered in various ways (Kerlinger, 1964, p. 487).

The purpose of the Likert-type scale, referred to as the summated rating scale, is to locate individuals somewhere along a continuum. The important characteristics of the summated scale have been identified by Kerlinger (1964) as: (1) The universe of items is conceived to be a set of items of equal value, one item is the same as any other item in value, and (2) Summated rating scales allow for intensity of expression.

The procedure for constructing a Likert-type scale is given by Selltiz, et al:

> (1) The investigator assembles a large number of items considered relevant to the attitude being investigated and either clearly favorable or clearly unfavorable. (2) These items are administered to a group of subjects representative of those with whom the questionnaire is to be used. The subjects indicate their response to each item by checking one of the categories of agreement-disagreement. (3) The responses to the various items are scored in such a way that a response indicative of the most favorable attitude is given the highest score. It makes no difference whether 5 is high and 1 is low or vice versa. The important thing is that the responses be scored consistently in terms of the attitudinal direction they indicate. Whether "approve" or "disapprove" is the favorable response to an item depends, of course, upon the content and wording of the item. (4) Each individual's total score is computed by adding his item scores. (5) The responses are analyzed to determine which of the items discriminate most clearly between the high scorers and the low scorers on the total scale. ... Items that do not show a substantial correlation with the total score, or that do not elicit different responses from those who score high and those who score low on the total test, are eliminated to insure that the questionnaire is "internally consistent," that is, that every item is related to the same general attitude (Selltiz, et al., 1959, pp. 367-68).

According to Selltiz, et al., items may be used which are not manifestly related to the variable being measured; all that is required is the item be empirically consistent with the total score. However, in the present investigation, the researcher was specifically interested in measuring two unidimensional factors. Consequently, the above procedure was strengthened through the use of factor analysis to empirically establish item relationship to a desired factor. Further, the response categories were altered from the traditional "approve" or "disapprove" to "never," "rarely," "sometimes," "frequently," and "very frequently."

Phase two began with the generation of forty-one items considered relevant to two variables: structure of interaction and content of interaction. These items were constructed to encompass a range of interactions between faculty and students, yet remain factorially pure with regard to an overall dimension. The items were then administered

to a doctoral seminar class of twenty students. Respondents were asked to complete the instrument and comment on the clarity and applicability of the items. This process resulted in only minor revisions. The instrument was then administered to forty faculty members at two universities in the midwest. A total of thirty-eight scoreable instruments were returned from the pilot. However, factor analysis dictates that the sample be as large as or larger than the variables under consideration. Consequently, the responses to three additional instruments were generated randomly increasing the total scoreable instruments to the required forty-one. The data was then fed into the BMD X 72 factor analytic program at the Oklahoma State University Computer Center, to determine the number of underlying dimensions measured by the instrument. The results appear as Table III. An examination of the factor analysis pointed to the existance of a factorially pure instrument. However, an analysis of the correlation matrix showed excessively high inter-item correlations, the majority of which ranged from 0.90 to 0.95. This condition led the researcher to hypothesize that, although all items loaded heavily on one factor, they failed to discriminate clearly between respondents.

Phase three confirmed this hypothesis through item analysis. The instruments were scored and divided into high and low groups. The mean scores were calculated for the items in each group and compared. Those items which did not show a mean difference of 0.50 were rejected as non-discriminators. This process eliminated substantially those items which tapped content of interaction. The analysis showed that although there was a variance in response to these items, these responses tended to vary in a systematic pattern. Consequently the researcher determined

TABLE III

FACTOR LOADINGS: TEACHER INTERACTION INVENTORY

Variables	Factors I	II	III	IV
1	0.96			
2	0.98			
3	0.98			
4	0.97			
5	0.97			
6	0.98			
7	0.97			
8	0.96			
9	0.93			
10	0.96			
11	0.93			
12	0.92			
13	0.96			
14	0.96			
15	0.96			
16	0.98			
17	0.99			
18	0.97			
19	0.93			
20	0.97			
21	0.98			
22	0.96			
23	0.96			
24	0.97			
25	0.91			
26	0.97			
27	0.96			
28	0.97			
29	0.94			
30	0.93			
31	0.96			
32	0.96			
33	0.94			
34	0.96			
35	0.98			
36	0.96			
37	0.98			
38	0.98			
39	0.96			
40	0.97			
41	0.95			
Factor Variance	93.32%	1.12%	0.85%	0.63%
Cumulative Total Variance	93.32%	94.44%	95.29%	95.92%

that it was unrealistic to continue construction of the content of interaction variable. Of the twenty-four items which assessed structural interactions, fifteen were found to discriminate at or beyond the 0.50 criteria.

Phase four constituted a factor analysis of the remaining fifteen items to determine changes, if any, in the factorial structure of the final instrument. The results appear as Table IV.

TABLE IV

FACTOR LOADINGS: TEACHER INTERACTION INVENTORY

Variables	Factors			
	I	II	III	IV
1	0.97			
2	0.97			
3	0.96			
4	0.96			
5	0.97			
6	0.98			
7	0.98			
8	0.92			
9	0.97			
10	0.96			
11	0.98			
12	0.96			
13	0.99			
14	0.96			
15	0.97			
Factor Variance	94.34%	1.24%	1.08%	0.71%
Cumulative Total Variance	94.34%	95.58%	96.66%	97.37%

Inspection of the data indicated no substantial deviation in the factorial structure, confirming the existence of unidimensionality found in the initial factor analysis. This unidimensionality, coupled with the consistently high factorial loadings, leads to the assumption of construct validity for the Teacher Interaction Inventory.

Phase four established the internal reliability of the instrument. The Spearman-Brown formula was utilized to estimate this reliability. Calculations showed the internal reliability coefficient for the fifteen item instrument to be 0.84. However, the researcher opted to increase the final instrument to twenty items with the addition of five like items. Correcting for the lengthier scale the Spearman-Brown formula for reliability of a test of length "n" put the coefficient at 0.87.

Scoring the Teacher Interaction Inventory

The Teacher Interaction Inventory yields high ordinal data. The responses of the various items are scored on a scale from one to five, "never" is scored as a one, "very frequently" is scored as five. Each individual's total score is computed by adding his item scores.

A copy of the instrument, with additional scoring information, appears as Appendix B.

Sample Selection

The selection of a population to be sampled in this investigation was strongly influenced by the nature of the variables under consideration. It was important to select a population which would not, by its make-up, restrict the variance of response. This criteria eliminated teachers in public elementary and secondary schools for two reasons.

First, it was felt that students at those levels were not sufficiently sophisticated to act as a viable reference group. Secondly, it was felt that structural interactions between faculty and students at those levels were, to a large extent, socially determined, and therefore not free to vary. Consequently, higher education was chosen. Here the variables seemed less likely to be influenced by social desirability producing a greater opportunity for variation in response.

The specific population sampled consisted of the nine and twelve month on-campus faculty of two major midwestern universities, stratified by academic rank. The categories were defined as follows: professor, associate professor, and assistant professor.

A total of 1,159 faculty members were identified from the budget reports of the two universities as meeting the criteria for inclusion in the sample. After identification of the parameters of the population were completed, a random sample of 210 was drawn from the combined populations of the universities. These selections were conducted as follows: "If individuals in a population are numbered in sequence and thus identified by number, selections can be made by following the random numbers in a systematic way" (Gilford, 1965, p. 139).

This process resulted in a 18.1% random sample among the three categories. Upon selection of the individuals to be sampled, instruments were coded and mailed to the sample population. A description of the administration process and return percentages appears elsewhere.

Statistical Treatment

A primary consideration in selecting the appropriate statistical technique for research is the level of measure attained by the

instruments. Once determined, the researcher can match the research data with the appropriate statistical model.

In the present investigation, the phi coefficient appeared the most appropriate in order to come to a decision about the hypothesis. The phi coefficient is closely related to chi square and can be computed from the 2 X 2 table with little difficulty. Chi square is used with data in the forms of frequencies, or data that can be reduced to frequencies. The size of the association between the attributes, the phi coefficient, varies with the discrepancy between the expected and observed cell values, and is irrespective of the nature of the variable. Calculation of the phi coefficient is as follows:

$$\chi^2 = \sum_{i=1}^{r} \sum_{j=1}^{k} \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

and

$$\Phi = \sqrt{\frac{\chi^2}{N}} \quad .$$

A test of the null hypotheses can be made through phi's relationship to chi square. According to Gilford (1965), "... if chi square is significant in a four-fold table, the corresponding Φ is significant."

For empirical significance, the level of confidence was set at the traditional 0.05 level.

Statistical Expectations

According to Gilford, "Any correlation that is not zero, and that is also statistically significant, denotes some degree of relationship between two variables" (Gilford, 1956, p. 103). However, once a

statistically significant correlation is established, the question of interpretation is the primary concern.

The degree of practical significance attached to any relationship must be viewed relative to the circumstances under which it was obtained. In the case of purely theoretically research, as is the present investigation, Gilford states "even very small correlations, if statistically significant, are often very indicative of a psychological law" (Gilford, 1956, pp. 104-105). In such investigations, a small but significant correlation may merely indicate that the measurement situation was contaminated by other confounding factors. Consequently, the researcher expects to obtain relationships in the lower half of the range, most probably between 0.20 and 0.50.

Data Collection

The data for this study was secured from a sample population of 210 assistant professors, associate professors, and professors in two universities. An introductory letter, instruments, and appropriate return material were mailed to the university address of each member of the sample population. Each instrument had been individually coded to allow the researcher to distinguish between respondents and non-respondents.

At the end of a two week waiting period, the researcher repeated the process with the non-respondents. In an effort to increase the return rate of non-respondents, the identifying code was eliminated for the second mailing.

The mail-out procedures produced the following response:

130	scoreable returns treated statistically
22	non-scoreable returns
9	returns which identified the respondents as no longer on staff, on sabbatical leave, or non-teaching
4	written responses which could not be treated statistically
5	scoreable responses received after collections were terminated
TOTAL 170	

The total response set represents 80.90% of the sample population. Considering only the returns which could be statistically treated, the response was 61.9% of the sample population. Data collection took place during the first three weeks of October, 1972.

A copy of the introductory and follow-up letters appear as Appendix C.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

Introduction

Presented in this chapter are the statistical analyses of the hypotheses and research questions which guided the investigation. Also presented is a supplementary analysis of the demographic data. Interpretation and discussion of the results is reserved for Chapter V.

Hypotheses and Research Questions

The hypotheses and research questions which guided the investigation were tested through phi's relationship to chi square. If chi square is significant in a four-fold table, the resulting phi coefficient is significant.

Hypothesis

H. 1. Choice of professional reference group (student, non-student) will be positively related to structural interactions with students.

To test this hypothesis, faculty responses on the Professional Orientation Inventory were scored to classify respondents as utilizing student or non-student reference groups. Faculty responses on the Teacher Interaction Inventory were dichotomized at the median to classify

respondents as either structurally close or structurally distant in their interactions with students. The relevant data appears in Table V.

TABLE V

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN PROFESSIONAL REFERENCE GROUPS AND STRUCTURAL INTERACTIONS WITH STUDENTS

	Reference Group	
Structure of Interaction	Student	Non-Student
Structurally Close	15	48
Structurally Distant	5	57
$\chi^2 = 5.76^*$ phi = 0.22	df = 1	$p < 0.05$

$^*\chi^2_{.05;1} = 3.84$

The chi square value for testing the main hypothesis was 5.76. With one degree of freedom, the value was significant at the 0.05 level. The hypothesis was accepted.

Sub-Hypotheses

S. H. 1. Choice of professional reference group (student, non-student) with regard to teaching activities will be positively related to structural interactions with students.

To test this hypothesis, faculty responses on the teaching activities sub-scale of the Professional Orientation Inventory were scored to classify respondents as utilizing student or non-student reference groups. Faculty responses on the Teacher Interaction Inventory were dichotomized at the median to classify respondents as either structurally close or structurally distant in their interactions with students. The relevant data ppears in Table VI.

TABLE VI

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN PROFESSIONAL REFERENCE GROUP WITH REGARD TO TEACHING ACTIVITIES AND STRUCTURAL INTERACTIONS WITH STUDENTS

	Reference Group	
Structure of Interaction	Student	Non-Student
Structurally Close	45	18
Structurally Distant	29	33
$\chi^2 = 7.86^*$ phi = 0.25 df = 1		$p < 0.05$

$^*\chi^2_{.05;1} = 3.84$

The chi square value for testing sub-hypothesis one was 7.86. With one degree of freedom, the value was significant at the 0.05 level. The hypothesis was accepted.

S. H. 2. Choice of professional reference group (student, non-student) with regard to professional specialization will be positively related to structural interactions with students.

To test this hypothesis, faculty responses on the professional specialization sub-scale of the Professional Orientation Inventory were scored to classify respondents as utilizing student or non-student reference groups. Faculty responses on the Teacher Interaction Inventory were dichotomized at the median to classify respondents as either structurally close or structurally distant in their interactions with students. The relevant data appears in Table VII.

TABLE VII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN PROFESSIONAL REFERENCE GROUP WITH REGARD TO PROFESSIONAL SPECIALIZATION AND STRUCTURAL INTERACTIONS WITH STUDENTS

	Reference Group	
Structure of Interaction	Student	Non-Student
Structurally Close	2	61
Structurally Distant	1	61
$\chi^2 = 0.33^*$ phi = 0.05 df = 1		$p > 0.05$

$^*\chi^2_{.05;1} = 3.84$

Due to restrictions in the expected cell frequencies, the chi square value for testing sub-hypothesis two cannot be meaningfully utilized. Consequently, sub-hypothesis two could not be tested in the present investigation. A further explanation of this limitation will appear in Chapter V.

Research Questions

R. Q. 1. Is choice of professional reference group (inner, outer) related to structural interactions with students?

To test research question one, faculty responses on the Professional Orientation Inventory were scored to classify respondents as utilizing an inner or an outer reference group. Faculty responses on the Teacher Interaction Inventory were dichotomized at the median to classify respondents as either structurally close or structurally distant in their interactions with students. The relevant data appears in Table VIII.

TABLE VIII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN REFERENCE GROUP AND STRUCTURAL INTERACTIONS WITH STUDENTS

	Reference Group	
Structure of Interaction	Inner	Outer
Structurally Close	50	13
Structurally Distant	51	11
$\chi^2 = 0.17^*$ phi = 0.04 df = 1		$p > 0.05$

$^*\chi^2_{.05;1} = 3.84$

The chi square value for testing research question one was 0.17. With one degree of freedom, the value was not significant at the 0.05 level.

R. Q. 2. Is choice of professional reference group (inner, outer) with regard to teaching activities related to structural interactions with students?

To test research question two, faculty responses on the teaching activities sub-scale of the Professional Orientation Inventory were scored to classify respondents as utilizing an inner or an outer reference group. Faculty responses on the Teacher Interaction Inventory were dichotomized at the median to classify respondents as either structurally close or structurally distant in their interactions with students. The relevant data appears in Table IX.

TABLE IX

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN REFERENCE GROUP WITH REGARD TO TEACHING ACTIVITIES AND STRUCTURAL INTERACTIONS WITH STUDENTS

	Reference Group	
Structure of Interaction	Inner	Outer
Structurally Close	61	2
Structurally Distant	62	0
$\chi^2 = 2.00^*$ phi = 0.13	df = 1	$p > 0.05$

$^*\chi^2_{.05;1} = 3.84$

Restrictions in the expected cell frequencies rendered research question two untestable. See Chapter V for a full explanation.

R. Q. 3. Is choice of professional reference group (inner, outer) with regard to professional specialization related to structural interactions with students?

To test research question three, faculty responses on the Professional Orientation Inventory were scored to classify respondents as utilizing an inner or an outer reference group. Faculty responses on the Teacher Interaction Inventory were dichotomized at the median to classify respondents as either structurally close or structurally distant in their interactions with students. The relevant data appears in Table X.

TABLE X

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN REFERENCE GROUP WITH REGARD TO PROFESSIONAL SPECIALIZATION AND STRUCTURAL INTERACTIONS WITH STUDENTS

	Reference Group	
Structure of Interaction	Inner	Outer
Structurally Close	33	30
Structurally Distant	32	30
$\chi^2 = 0.01^*$ phi = 0.01 df = 1		$p > 0.05$

$^*\chi^2_{.05;1} = 3.84$

The chi square value for testing research question three was 0.01. With one degree of freedom, the value was not significant at the 0.05 level.

Supplementary Analysis of Demographic Data

The tests for relationships existing between the demographic data and the two response variables varied depending upon the form of the data. Data which could be statistically treated in a 2 X 2 cell format was tested using chi square converted to a phi coefficient. Data which demanded a cell format greater than 2 X 2 was tested using the coefficient of contingency. In either case, when the chi square value is significant, the resulting coefficient of relationship is significant.

To test for relationships between reference group and sex, faculty responses on the Professional Orientation Inventory were scored to classify respondents as utilizing student or non-student reference groups, and inner or outer reference groups. Sex was treated as a natural dichotomy. The relationship between professional reference group and sex appears in Table XI.

TABLE XI

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN SEX AND PROFESSIONAL REFERENCE GROUP

	Reference Group		Reference Group	
Sex	Student	Non-Student	Inner	Outer
Male	16	91	87	20
Female	4	11	11	4
$\chi^2 = 1.32^*$ phi = 0.10 df = 1 $p > 0.05$			$\chi^2 = 0.53^*$ phi = 0.07 df = 1 $p > 0.05$	

$^*\chi^2_{.05;1} = 3.84$

Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between student, non-student reference group and sex could not be meaningfully utilized. The chi square value of 0.53 for testing the relationship between inner, outer reference group and sex was not significant at the 0.05 level.

The relationship between professional reference group with regard to teaching activities and sex appears in Table XII.

TABLE XII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN SEX AND PROFESSIONAL REFERENCE GROUP WITH REGARD TO TEACHING ACTIVITIES

	Reference Group		Reference Group	
Sex	Student	Non-Student	Inner	Outer
Male	61	46	106	1
Female	13	2	14	1
$\chi^2 = 4.85^*$ phi = 0.20 df = 1 $p < 0.05$			$\chi^2 = 2.68^*$ phi = 0.15 df = 1 $p > 0.05$	

$^*\chi^2_{.05;1} = 3.84$

The chi square value of 4.85 for testing the relationship between student, non-student reference group with regard to teaching activities and sex was significant at the 0.05 level. Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between inner, outer professional reference group with regard

to teaching activities and sex cannot be meaningfully utilized. See Chapter V for a full explanation.

The relationship between professional reference group with regard to professional specialization and sex appears in Table XIII.

TABLE XIII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN SEX AND PROFESSIONAL REFERENCE GROUP WITH REGARD TO PROFESSIONAL SPECIALIZATION

	Reference Group		Reference Group	
Sex	Student	Non-Student	Inner	Outer
Male	3	104	52	55
Female	0	15	10	5
$\chi^2 = 0.43^*$ phi = 0.06 df = 1 p > 0.05			$\chi^2 = 1.72^*$ phi = 0.12 df = 1 p > 0.05	

$^*\chi^2_{.05;1} = 3.84$

Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between student, non-student professional reference group with regard to professional specialization and sex could not be meaningfully utilized. The chi square value of 1.72 for testing the relationship between inner, outer professional reference group with regard to professional specialization and sex was not significant at the 0.05 level.

To test for the relationship between sex and structure of interaction, faculty responses on the Teacher Interaction Inventory were dichotomized at the median to classify respondents as either structurally close or structurally distant in their interactions with students. Sex was treated as a natural dichotomy. The relevant data appears in Table XIV.

TABLE XIV

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN SEX AND STRUCTURE OF INTERACTION WITH STUDENTS

	Structure of Interaction	
Sex	Close	Distant
Male	53	54
Female	8	7
$\chi^2 = 0.08^*$ phi = 0.03	df = 1	$p > 0.05$

$^*\chi^2_{.05;1} = 3.84$

The chi square value for testing the relationship between sex and structure of interaction was 0.08. With one degree of freedom, the value was not significant at the 0.05 level.

To test for relationships between reference group and attained degree, faculty responses on the Professional Orientation Inventory were scored to classify respondents as utilizing student or non-student

reference groups, and inner or outer reference groups. Education was treated as a dichotomy: masters degree and doctorate. The relationship between professional reference group and education appears in Table XV.

TABLE XV

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN PROFESSIONAL REFERENCE GROUP AND EDUCATION

	Reference Group		Reference Group	
Education	Student	Non-Student	Inner	Outer
Masters	8	15	22	1
Doctors	12	85	74	23
$\chi^2 = 7.63^*$ phi = 0.24 df = 1 $p < 0.05$			$\chi^2 = 4.37^*$ phi = 0 df = 1 $p < 0.05$	

$^*\chi^2_{.05;1} = 3.84$

Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between student-non-student professional reference group and education level, and the chi square value for testing the relationship between inner, outer professional reference group and education could not be meaningfully utilized.

The relationship between professional reference group with regard to teaching activities and education appears in Table XVI.

TABLE XVI

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN PROFESSIONAL REFERENCE GROUP WITH REGARD TEACHING ACTIVITIES AND EDUCATION

	Reference Group		Reference Group	
Education	Student	Non-Student	Inner	Outer
Masters	15	8	23	0
Doctors	57	40	95	2
$\chi^2 = 0.32$* phi = 0.05 df = 1 p > 0.05			$\chi^2 = 0.48$ phi = 0.08 df = 1 p > 0.05	

*$\chi^2_{.05;1} = 3.84$

The chi square value of 0.32 for testing the relationship between student, non-student professional reference group with regard to teaching activities and education was not significant at the 0.05 level. Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between inner, outer professional reference group with regard to teaching activities could not be meaningfully utilized.

The relationship between professional reference group with regard to professional specialization and education appears in Table XVII.

Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between student, non-student professional reference group with regard to professional specialization and education could not be meaningfully utilized. The chi square value of 8.56 for testing the relationship between inner, outer

professional reference group with regard to professional specialization and education was significant at the 0.05 level.

TABLE XVII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN PROFESSIONAL REFERENCE GROUP WITH REGARD TO PROFESSIONAL SPECIALIZATION AND EDUCATION

	Reference Group		Reference Group	
Education	Student	Non-Student	Inner	Outer
Masters	2	21	18	5
Doctors	1	96	43	54
$\chi^2 = 4.80^*$ phi = 0.20 df = 1 $p < 0.05$			$\chi^2 = 8.56^*$ phi = 0.26 df = 1 $p < 0.05$	

$^*\chi^2_{.05;1} = 3.84$

To test for the relationship between education and structure of interaction, faculty responses on the Teacher Interaction Inventory were dichotomized at the median to classify respondents as either structurally close or structurally distant in their interactions with students. Education was treated as a dichotomy: masters degree and doctorate. The relevant data appears in Table XVIII.

The chi square value of 0.05 for testing the relationship between education and structure of interaction was not significant at the 0.05 level.

TABLE XVIII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN EDUCATION AND STRUCTURE OF INTERACTION WITH STUDENTS

	Structure of Interaction	
Education	Close	Distant
Masters	11	12
Doctorate	49	48
$\chi^2 = 0.05$* phi = 0.02	df = 1	$p > 0.05$

*$\chi^2_{.05;1} = 3.84$

To test for relationships between professional reference group and faculty rank, responses on the Professional Orientation Inventory were scored to classify respondents as utilizing student or non-student reference groups, and inner or outer reference groups. Faculty rank was treated as a trichotomy: assistant professor, associate professor, and professor. The relationship between professional reference group and faculty rank appears in Table XIX.

TABLE XIX

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN PROFESSIONAL REFERENCE GROUP AND FACULTY RANK

	Reference Group		Reference Group	
Faculty Rank	Student	Non-Student	Inner	Outer
Assistant Professor	14	28	35	7
Associate Professor	1	26	23	4
Professor	5	48	40	13
$\chi^2 = 13.84$* C = 0.32 df = 2	$p < 0.05$		$\chi^2 = 1.43$* C = 0.10 df = 2	$p > 0.05$

*$\chi^2_{.05;2} = 5.99$

The chi square value of 13.84 for testing the relationship between student, non-student reference group and faculty rank was significant at the 0.05 level. The chi square value of 1.43 for testing the relationship between inner, outer reference group and faculty rank was not significant at the 0.05 level.

The relationship between professional reference group with regard to teaching and faculty rank appears in Table XX.

TABLE XX

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN PROFESSIONAL REFERENCE GROUP WITH REGARD TO TEACHING ACTIVITIES AND FACULTY RANK

	Reference Group		Reference Group	
Faculty Rank	Student	Non-Student	Inner	Outer
Assistant Professor	31	11	42	0
Associate Professor	18	9	26	1
Professor	25	28	52	1
$\chi^2 = 7.49^*$ C = 0.24 df = 2 $p < 0.05$			$\chi^2 = 1.43^*$ C = 0.10 df = 2 $p > 0.05$	

$^*\chi^2_{.05;2} = 5.99$

The chi square value of 7.49 for testing the relationship between student, non-student professional reference group with regard to teaching activities and faculty rank was significant at the 0.05 level. Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between inner, outer professional reference group and faculty rank could not be meaningfully utilized.

The relationship between professional reference group with regard to professional specialization and faculty rank appears in Table XXI.

TABLE XXI

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN PROFESSIONAL REFERENCE GROUP WITH REGARD TO PROFESSIONAL SPECIALIZATION AND FACULTY RANK

	Reference Group		Reference Group	
Faculty Rank	Student	Non-Student	Inner	Outer
Assistant Professor	3	39	24	18
Associate Professor	0	27	16	11
Professor	0	53	22	31
$\chi^2 = 5.86^*$	$C = 0.21$	$df = 2$	$p > 0.05$	
$\chi^2 = 3.28^*$	$C = 0.16$	$df = 2$	$p > 0.05$	

$^*\chi^2_{.05;2} = 5.99$

Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between student, non-student reference group with regard to professional specialization and faculty rank could not be meaningfully utilized. The chi square value of 3.28 for testing the relationship between inner, outer professional reference group with regard to professional specialization and faculty rank was not significant at the 0.05 level.

To test for the relationship between faculty rank and structure of interaction, faculty responses on the Teacher Interaction Inventory were dichotomized at the median to classify respondents as either structurally close or structurally distant in their interactions with students. Faculty rank was treated as a trichotomy: assistant professor, associate professor, and professor. The relevant data appears in Table XXII.

TABLE XXII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN FACULTY RANK AND STRUCTURE OF INTERACTION

	Structure of Interaction	
Faculty Rank	Close	Distant
Assistant Professor	22	20
Associate Professor	9	18
Professor	30	23
$\chi^2 = 4.01^*$ C = 0.18	df = 2	$p > 0.05$

$^*\chi^2_{.05;2} = 5.99$

The chi square value of 4.01 for testing the relationship between faculty rank and structure of interaction was not significant at the 0.05 level.

To test for the relationship between professional reference group and age, responses on the Professional Orientation Inventory were scored to classify respondents as utilizing student or non-student reference groups, and inner or outer reference groups. Respondents were classified by age in one of four categories: 20-29, 30-39, 40-49, and over 49. The relationship between age and professional reference group appears in Table XXIII.

TABLE XXIII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN PROFESSIONAL REFERENCE GROUP AND AGE

	Reference Group		Reference Group	
Age	Student	Non-Student	Inner	Outer
20-29	0	5	4	1
30-39	9	38	38	9
40-49	4	26	21	9
Over 49	7	33	35	5
$\chi^2 = 1.48^*$	$C = 0.10$	$df = 3$	$p > 0.05$	$\chi^2 = 3.34^*$ $C = 0.16$ $df = 3$ $p > 0.05$

$^*\chi^2_{.05;3} = 7.82$

The chi square value of 1.48 for testing the relationship between student, non-student professional reference group and age was not significant at the 0.05 level. Due to restrictions in the expected cell

frequencies, the chi square value for testing the relationship between inner, outer professional reference group could be meaningfully utilized.

The relationship between age and professional reference group with regard to teaching activities appears in Table XXIV.

TABLE XXIV

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN PROFESSIONAL REFERENCE GROUP WITH REGARD TO TEACHING ACTIVITIES AND AGE

	Reference Group			Reference Group	
Age	Student	Non-Student	Age	Inner	Outer
20-39	34	18	20-29	5	0
40-49	21	9	30-39	47	0
Over 49***	19	21	40-49	29	1
			Over 49	39	1
$\chi^2 = 4.48$*	C = 0.19	df = 2 p > 0.05	$\chi^2 = 1.58$**	C = 0.11	df = 3 p > 0.05

*$\chi^2_{.05;2} = 5.99$

**$\chi^2_{.05;3} = 7.82$

***Categories collapsed to compensate for restricted cell frequencies.

The chi square value of 4.48 for testing the relationship between student, non-student professional reference groups with regard to teaching activities and age was not significant at the 0.05 level. Due

to restrictions in the expected cell frequencies, the chi square value for testing the relationship between inner, outer professional reference groups with regard to teaching activities could not be meaningfully utilized.

The relationship between age and professional reference group with regard to professional specialization appears in Table XXV.

TABLE XXV

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN PROFESSIONAL REFERENCE GROUP WITH REGARD TO PROFESSIONAL SPECIALIZATION AND AGE

	Reference Group				Reference Group	
Age	Student	Non-Student		Age	Inner	Outer
20-29	0	5		20-39	25	27
30-39	1	46		40-49	11	19
40-49	0	30		Over 49***	26	14
Over 49	2	38				
$\chi^2 = 1.98$*	C = 0.13	df = 3	p > 0.05	$\chi^2 = 5.78$**	C = 0.21	df = 2	p > 0.05

*$\chi^2_{.05;2} = 5.99$

**$\chi^2_{.05;3} = 7.82$

***Categories collapsed to compensate for restricted cell frequencies.

Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between student, non-student

professional reference group with regard to professional specialization and age could not be meaningfully utilized. The chi square value of 5.78 for testing the relationship between inner, outer professional reference group with regard to professional specialization and age was not significant at the 0.05 level.

To test for the relationship between age and structure of interaction, faculty responses on the Teacher Interaction Inventory were dichotomized at the median to classify respondents as either structurally close or structurally distant in their interactions with students. Respondents were classified by age in one of four categories: 20-29, 30-39, 40-49, and over 49. The relationship between age and structure of interaction appears in Table XXVI.

TABLE XXVI

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN AGE AND STRUCTURE OF INTERACTION WITH STUDENTS

	Structure of Interaction	
Age	Close	Distant
20-39	25	27
40-49	16	14
Over 49**	20	20
$\chi^2 = 0.21$* C = 0.04	df = 2	$p > 0.05$

*$\chi^2_{.05;2} = 5.99$

**Categories collapsed to compensate for restricted cell frequencies.

The chi square value of 0.21 for testing the relationship between age and structure of interaction was not significant at the 0.05 level.

To test for relationships between professional reference group and years teaching at place of employment, responses on the Professional Orientation Inventory were scored to classify respondents as utilizing student or non-student reference groups, and inner or outer reference groups. Respondents were classified according to the number of years teaching at place of employment in one of five categories: 0-4 years, 5-9 years, 10-14 years, 15-19 years, and over 19 years. The relationship between years at place of employment and professional reference group appears in Table XXVII.

TABLE XXVII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN YEARS AT PLACE OF EMPLOYMENT AND PROFESSIONAL REFERENCE GROUP

	Reference Group			Reference Group	
Years at Place of Employment	Student	Non-Student	Years at Place of Employment	Inner	Outer
0-4	6	36	0-4	34	8
5-9	5	30	5-9	23	12
10-14	3	8	Over 9***	44	4
15-19	1	8			
Over 19	5	23			
$\chi^2 = 1.44$* C = 0.10 df = 4 p > 0.05			$\chi^2 = 8.79$** C = 0.26 df = 2 p < 0.05		

*$\chi^2_{.05;4} = 9.49$

**$\chi^2_{.05;2} = 5.99$

***Categories collapsed to compensate for restricted cell frequencies.

The chi square value of 1.44 for testing the relationship between student, non-student professional reference group and years at place of employment was not significant at the 0.05 level. The chi square value of 8.79 for testing the relationship between inner, outer professional reference groups and years at place of employment was significant at the 0.05 level.

The relationship between years at place of employment and professional reference group with regard to teaching activities appears in Table XXVIII.

TABLE XXVIII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN YEARS AT PLACE OF EMPLOYMENT AND PROFESSIONAL REFERENCE GROUP WITH REGARD TO TEACHING ACTIVITIES

	Reference Group		Reference Group	
Years at Place of Employment	Student	Non-Student	Inner	Outer
0-4	27	15	42	0
5-9	21	14	34	1
10-14	7	4	11	0
15-19	5	4	9	0
Over 19	14	14	27	1
$\chi^2 = 1.58^*$	$C = 0.11$	$df = 4$ $p > 0.05$	$\chi^2 = 2.05^*$	$C = 0.12$ $df = 4$ $p > 0.05$

$^*\chi^2_{.05;4} = 9.49$

The chi square value of 1.58 for testing the relationship between student, non-student professional reference group with regard to teaching activities and years at place of employment was not significant at the 0.05 level. Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between inner, outer professional reference group with regard to teaching activities could not be meaningfully utilized.

The relationship between years at place of employment and professional reference group with regard to professional specialization appears in Table XXIX.

TABLE XXIX

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN YEARS OF EMPLOYMENT AND PROFESSIONAL REFERENCE GROUP WITH REGARD TO PROFESSIONAL SPECIALIZATION

	Reference Group		Reference Group	
Years at Place of Employment	Student	Non-Student	Inner	Outer
0-4	1	41	20	22
5-9	0	35	16	19
10-14	0	11	4	7
15-19	0	9	6	3
Over 19	2	26	19	9
$\chi^2 = 4.04^*$	$C = 0.18$	$df = 4$	$p > 0.05$	$\chi^2 = 5.55^*$ $C = 0.20$ $df = 4$ $p > 0.05$

$^*\chi^2_{.05;4} = 9.49$

Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between student, non-student professional reference group with regard to professional specialization and years at place of employment could not be meaningfully utilized. The chi square value of 5.55 for testing the relationship between inner, outer professional reference groups with regard to professional specialization and years at place of employment was not significant at the 0.05 level.

To test fo the relationship between years at place of employment and structure of interaction, faculty responses on the Teacher Interaction Inventory were dichotomized at the median to classify respondents as either structurally close or structurally distant in their interactions with students. Respondents were classified according to the number of years teaching at place of employment in one of five categories: 0-4 years, 5-9 years, 10-14 years, 15-19 years, and over 19 years. The relationship between years at place of employment and structure of interaction appears in Table XXX.

The chi square value of 2.72 for testing the relationship between years at place of employment and structure of interaction was not significant at the 0.05 level.

TABLE XXX

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN YEARS AT PLACE OF EMPLOYMENT AND STRUCTURE OF INTERACTION

	Structure of Interaction	
Years at Place of Employment	Close	Distant
0-4	22	20
5-9	16	19
10-14	5	6
15-19	3	6
Over 19	17	11
$\chi^2 = 2.72^*$ C = 0.15	df = 4	$p > 0.05$

$^*\chi^2_{.05;4} = 9.49$

To test for relationships between professional reference group and years in higher education, responses on the Professional Orientation Inventory were scored to classify respondents as utilizing student or non-student reference groups, and inner or outer reference groups. Respondents were classified according to the number of years in higher education in one of three categories: 0-9 years, 10-19 years, and over 19 years. The relationship between years in higher education and professional reference group appears in Table XXXI.

The chi square value of 0.22 for testing the relationship between student, non-student professional reference group and years in higher education was not significant at the 0.05 level. The chi square value

of 3.88 for testing the relationship between inner, outer professional reference group and years in higher education was not significant at the 0.05 level.

TABLE XXXI

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN YEARS IN HIGHER EDUCATION AND PROFESSIONAL REFERENCE GROUP

	Reference Group		Reference Group	
Years in Higher Education	Student	Non-Student	Inner	Outer
0-9	8	48	41	15
10-19	6	28	29	5
Over 19	6	29	31	4
$\chi^2 = 0.22^*$ C = 0.04 df = 2 p > 0.05			$\chi^2 = 3.88^*$ C = 0.17 df = 2 p > 0.05	

$^*\chi^2_{.05;2} = 5.99$

The relationship between years in higher education and professional reference group with regard to teaching activities appears in Table XXXII.

The chi square value of 7.17 for testing the relationship between student, non-student professional reference group with regard to teaching activities and years in higher education was not significant at the 0.05 level. Due to restrictions in the expected cell frequencies,

the chi square value for testing the relationship between inner, outer professional reference groups and years in higher education could not meaningfully be utilized.

TABLE XXXII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN YEARS IN HIGHER EDUCATION AND PROFESSIONAL REFERENCE GROUP WITH REGARD TO TEACHING ACTIVITIES

	Reference Group		Reference Group	
Years in Higher Education	Student	Non-Student	Inner	Outer
0-4	8	7	15	0
5-9	28	13	40	1
10-14	17	6	23	0
15-19	5	6	11	0
Over 19	16	19	34	1
$\chi^2 = 7.17^*$	$C = 0.23$	$df = 4$ $p > 0.05$	$\chi^2 = 1.33^*$	$C = 0.10$ $df = 4$ $p > 0.05$

$^*\chi^2_{.05;4} = 9.49$

The relationship between years in higher education and professional reference group with regard to professional specialization appears in Table XXXIII.

TABLE XXXIII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN YEARS IN HIGHER EDUCATION AND PROFESSIONAL REFERENCE GROUP WITH REGARD TO PROFESSIONAL SPECIALIZATION

	Reference Group		Reference Group	
Years in Higher Education	Student	Non-Student	Inner	Outer
0-4	0	15	9	6
5-9	0	41	16	22
10-14	1	22	11	12
15-19	0	11	5	6
Over 19	2	33	21	14
$\chi^2 = 3.66^*$	$C = 0.16$	$df = 4$	$p > 0.05$	$\chi^2 = 2.15^*$ $C = 0.13$ $df = 4$ $p > 0.05$

$^*\chi^2_{.05;4} = 9.49$

Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between student, non-student professional reference group with regard to professional specialization and years in higher education could not be meaningfully utilized. The chi square value of 2.15 for testing the relationship between inner, outer professional reference group and years in higher education was not significant at the 0.05 level.

To test for the relationship between years in higher education and structure of interaction, faculty responses on the Teacher Interaction Inventory were dichotomized at the median to classify respondents as

either structurally close or structurally distant in their interactions with students. Respondents were classified according to the number of years in higher education in one of five categories: 0-4 years, 5-9 years, 10-14 years, 15-19 years, and over 19 years.

The relationship between years in higher education and structure of interaction appears in Table XXXIV.

TABLE XXXIV

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN YEARS IN HIGHER EDUCATION AND STRUCTURE OF INTERACTION

	Structure of Interaction	
Years in Higher Education	Close	Distant
0-4	9	6
5-9	17	24
10-14	13	10
15-19	4	7
Over 19	20	15
$\chi^2 = 3.71^*$ C = 0.17	df = 4	$p > 0.05$

$^*\chi^2_{.05;4} = 9.49$

The chi square value of 3.71 for testing the relationship between years in higher education and structure of interaction was not significant at the 0.05 level.

To test for relationships between professional reference group and credit hours taught per semester, responses on the Professional Orientation Inventory were scored to classify respondents as utilizing student or non-student reference groups, and inner or outer reference groups. Respondents were classified according to credit hours taught in one of four categories: 1-3 hours, 4-6 hours, 7-9 hours, and over 9 hours. The relationship between credit hours taught per semester and professional reference group appears in Table XXXV.

TABLE XXXV

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN CREDIT HOURS TAUGHT PER SEMESTER AND PROFESSIONAL REFERENCE GROUP

	Reference Group		Reference Group	
Credit Hours Taught	Student	Non-Student	Inner	Outer
1-3	3	16	14	5
4-6	1	33	28	6
7-9	5	35	32	8
Over 9	11	18	24	5
$\chi^2 = 14.75^*$	$C = 0.33$	$df = 3$	$p < 0.05$	$\chi^2 = 0.73^*$ $C = 0.07$ $df = 3$ $p > 0.05$

$^*\chi^2_{.05;3} = 7.82$

The chi square value of 14.75 for testing the relationship between student, non-student professional reference groups and credit hours

taught per semester was significant at the 0.05 level. The chi square value of 0.73 for testing the relationship between inner, outer professional reference group and credit hours taught per semester was not significant at the 0.05 level.

The relationship between credit hours taught per semester and professional reference group with regard to teaching activities appears in Table XXXVI.

TABLE XXXVI

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN CREDIT HOURS TAUGHT PER SEMESTER AND PROFESSIONAL REFERENCE GROUP WITH REGARD TO TEACHING ACTIVITIES

	Reference Group		Reference Group	
Credit Hours Taught	Student	Non-Student	Inner	Outer
1-3	11	8	19	0
4-6	20	14	33	1
7-9	22	18	40	0
Over 9	21	8	28	1
$\chi^2 = 2.32^*$	$C = 0.14$	$df = 3$	$p > 0.05$	$\chi^2 = 1.92^*$ $C = 0.12$ $df = 3$ $p > 0.05$

$^*\chi^2_{.05;3} = 7.82$

The chi square value of 2.32 for testing the relationship between student, non-student professional reference group with regard to

teaching activities and credit hours taught per semester was not significant at the 0.05 level. Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between inner, outer professional reference group with regard to teaching activities and credit hours taught per semester could not be meaningfully utilized.

The relationship between credit hours taught per semester and professional reference group with regard to professional specialization appears in Table XXXVII.

TABLE XXXVII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN CREDIT HOURS TAUGHT PER SEMESTER AND PROFESSIONAL REFERENCE GROUP WITH REGARD TO PROFESSIONAL SPECIALIZATION

	Reference Group		Reference Group	
Credit Hours Taught	Student	Non-Student	Inner	Outer
1-3	1	18	12	7
4-6	0	34	16	18
7-9	0	40	17	23
Over 9	2	27	17	12
$\chi^2 = 4.86^*$	$C = 0.20$	$df = 3$	$p > 0.05$	$\chi^2 = 3.16^*$ $C = 0.16$ $df = 3$ $p > 0.05$

$^*\chi^2_{.05;3} = 7.82$

Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between student, non-student professional reference group with regard to professional specialization and credit hours taught per semester could not be meaningfully utilized. The chi square value of 3.16 for testing the relationship between inner, outer professional reference group with regard to professional specialization and credit hours taught per semester was not significant at the 0.05 level.

To test for the relationship between credit hours taught per semester and structure of interaction, faculty responses on the Teacher Interaction Inventory were dichotomized at the median to classify respondents as either structurally close or structurally distant in their interactions with students. Respondents were classified according to credit hours taught per semester in one of four categories: 1-3 hours, 4-6 hours, 7-9 hours, and over 9 hours. The relationship between credit hours taught and structure of interaction appears in Table XXXVIII.

TABLE XXXVIII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN CREDIT HOURS TAUGHT PER SEMESTER AND STRUCTURE OF INTERACTION

	Structure of Interaction	
Credit Hours Taught Per Semester	Close	Distant
1-3	9	10
4-6	15	19
7-9	19	21
Over 9	18	11
$\chi^2 = 2.31^*$ C = 0.14	df = 3	$p > 0.05$

$^*\chi^2_{.05;3} = 7.82$

The chi square value of 2.31 for testing the relationship between number of credit hours taught per semester and structure of interaction was not significant at the 0.05 level.

To test for relationship between professional reference group and teaching speciality, responses on the Professional Orientation Inventory were scored to classify respondents as utilizing student or non-student reference groups, and inner or outer reference groups. Respondents were classified according to teaching specialty in one of two categories: behavioral sciences and physical sciences.

The relationship between professional reference group and teaching specialty appears in Table XXXIX.

TABLE XXXIX

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN PROFESSIONAL REFERENCE GROUP AND TEACHING SPECIALTY

	Reference Group				Reference Group			
Teaching Specialty	Student	Non-Student			Inner			Outer
Behavioral	17	61			66			12
Physical	3	38			31			10
$\chi^2 = 4.03^*$	phi = 0.19	df = 1	$p < 0.05$		$\chi^2 = 1.45^*$	phi = 0.11	df = 1	$p > 0.05$

$^*\chi^2_{.05;1} = 3.84$

The chi square value of 4.03 for testing the relationship between student, non-student professional reference group and teaching specialty was significant at the 0.05 level. The chi square value of 1.45 for testing the relationship between inner, outer professional reference group and teaching specialty was not significant at the 0.05 level.

The relationship between teaching specialty and professional reference group with regard to teaching activities appears in Table XL.

TABLE XL

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN TEACHING SPECIALTY AND PROFESSIONAL REFERENCE GROUP WITH REGARD TO TEACHING ACTIVITIES

	Reference Group		Reference Group	
Specialty	Student	Non-Student	Inner	Outer
Behavioral	52	26	76	2
Physical	21	20	41	0
$\chi^2 = 2.70^*$ phi = 0.15 df = 1 p > 0.05			$\chi^2 = 1.07$ phi = 0.10 df = 1 p > 0.05	

$^*\chi^2_{.05;1} = 3.84$

The chi square value of 2.70 for testing the relationship between student, non-student professional reference group with regard to teaching activities and teaching specialty was not significant at the 0.05 level. Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between inner, outer

professional reference group with regard to teaching activities and teaching specialty could not be meaningfully utilized.

The relationship between teaching specialty and professional reference group with regard to professional specialization appears in Table XLI.

TABLE XLI

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN TEACHING SPECIALTY AND PROFESSIONAL REFERENCE GROUP WITH REGARD TO PROFESSIONAL SPECIALIZATION

	Reference Group		Reference Group	
Teaching Specialty	Student	Non-Student	Inner	Outer
Behavioral	2	76	44	34
Physical	1	40	17	24
$\chi^2 = 0.00^*$ phi = 0.00 df = 1 $p > 0.05$			$\chi^2 = 2.40^*$ phi = 0.14 df = 1 $p > 0.05$	

$^*\chi^2_{.05;1} = 3.84$

Due to restrictions in the expected cell frequencies, the chi square value for testing the relationship between student, non-student professional reference group with regard to professional specialization and teaching specialty could not be meaningfully utilized. The chi square value of 2.40 for testing the relationship between inner, outer professional reference group with regard to professional specialization and teaching specialty was not significant at the 0.05 level.

To test for the relationship between teaching specialty and structure of interaction, faculty responses on the Teacher Interaction Inventory were dichotomized at the median to classify respondents as either structurally close or structurally distant in their interactions with students. Respondents were classified according to teaching specialty in one of two categories: behavioral sciences or physical sciences. The relationship between teaching specialty and structure of interaction appears in Table XLII.

TABLE XLII

SUMMARY DATA FOR THE TEST OF RELATIONSHIP BETWEEN TEACHING SPECIALTY AND STRUCTURE OF INTERACTION

	Structure of Interaction	
Teaching Specialty	Close	Distant
Behavioral	43	35
Physical	17	24
$\chi^2 = 2.01^*$ phi = 0.13	df = 1	$p > 0.05$

$^*\chi^2_{.05;1} = 3.84$

The chi square value of 2.01 for testing the relationship between teaching specialty and structure of interaction was not significant at the 0.05 level.

CHAPTER V

FINDINGS, IMPLICATIONS, AND RECOMMENDATIONS

Introduction

Chapter V attempts to draw together the major findings of this research, attach meaning to the presentation of data in the preceding chapters, discuss the instrumentation of the study, and derive issues which warrant further investigation.

Instrumentation

Professional Orientation Inventory

Responses on the Professional Orientation Inventory revealed certain limitations within the scale. When responses were dichotomized to classify respondents as utilizing inner or outer professional reference groups, only the professional specialization sub-scale acted as a categorical scale. The teaching activities sub-scale did not successfully classify respondents. Conversely, when responses were dichotomized to classify respondents as utilizing student or non-student reference groups, only the teaching activities sub-scale acted as a categorical scale. The professional specialization sub-scale did not successfully classify respondents. Dichotomized either way, the total scale of the Professional Orientation Inventory did act as a categorical scale.

On the basis of this information, it appears that the two sub-scales within the Professional Orientation Inventory only become viable scales when dichotomized as indicated above, each with different reference categories acting as alternatives for orientation. According to Siegel (1956) if more than 20 percent of the cells have an expected frequency of less than five, the chi square test may not meaningfully be applied. This condition rendered one sub-hypothesis, one research question and numerous other relationships untestable. The restricted size of the expected cell frequencies simply would not allow the chi square value to be meaningfully interpreted.

The response patterns on the three scales of the Professional Orientation Inventory seem theoretically important. Within the teaching activities sub-scale, respondents tended, almost without exception, to utilize within-institution categories as alternatives for orientation. Yet, within the professional specialization sub-scale, respondents tended, almost without exception, to utilize non-student categories as alternatives for orientation. Considered independently, both sub-scales proved to be empirically fruitful. When taken together to form the total scale, the combined effect proved, likewise, to be empirically fruitful. The empirical usefulness of the total scale supports the hypothesis that, as reference groups coincide for various activities, the more potent they become. Thus, it seems the identification of specific reference groups for specific role performances as well as determination of a general reference group does survive heuristic purposes.

Teacher Interaction Inventory

The Teacher Interaction Inventory appeared to serve the purpose for which it was designed. Calculations showed the internal reliability to be 0.87, and the factorial structure to be unidimensional. However, additional statistical analysis should be conducted to refine the discriminative power of the items and to determine if the instrument is truly a continuous or categorical measure.

Commentary

Although the theoretical underpinnings which fostered the development of the instruments for this investigation pointed to two theoretically oblique but related factors, this fact has not been empirically established. The possibility exists that the relationships between the variables may be spurious due to measures which tap identical factors. In the present investigation, the researcher was unable to resolve this issue. Additional research needs to be conducted to clarify this point.

Significant Findings

The statistically significant findings of this study were as follows:

1) There was a significant relationship between choice of professional reference group (student, non-student) and structural interactions with students. The tendency was for faculty members who utilized students as a professional reference group to interact more closely with students than

faculty members who utilized non-student professional reference groups.

2) There was a significant relationship between choice of professional reference group (student, non-student) with regard to teaching activities and structural interactions with students. The tendency was for faculty members who utilized students as a professional reference group with regard to teaching activities to interact more closely with students than teachers who utilized non-student professional reference groups.

3) There was a significant relationship between choice of professional reference group (student, non-student) with regard to teaching activities and sex. The tendency was for females to utilize students as a professional reference group with regard to teaching activities to a greater extent than did males.

4) There was a significant relationship between choice of professional reference group (inner, outer) with regard to professional specialization and education. Faculty members with masters degrees tended to utilize an inner professional reference group with regard to professional specialization to a greater extent than did faculty members with doctors degrees.

5) There was a significant relationship between choice of professional reference group (student, non-student) and faculty rank. Assistant professors tended to utilize students as a professional reference group to a greater extent than did faculty members with higher faculty rank.

6) There was a significant relationship between choice of professional reference group (student, non-student) with regard to teaching activities and faculty rank. Assistant professors tended to utilize students as a professional reference group with regard to teaching activities to a greater extent than did faculty members with higher faculty rank.

7) There was a significant relationship between years at place of employment and choice of professional reference group (inner, outer). As length of time at place of employment increased, faculty members were more likely to utilize an inner professional reference group.

8) There was a significant relationship between choice of professional reference group (student, non-student) and credit hours taught per semester. As the number of credit hours taught increased, faculty members were more likely to utilize students as a professional reference group.

9) There was a significant relationship between choice of professional reference group (student, non-student) and teaching specialty. Faculty members teaching the behavioral sciences tended to utilize students as a professional reference group to a greater extent than faculty members who teach the physical sciences.

Implications

> Whenever a social scientist discovers a new principal or social pattern in what had previously appeared to be chaos, and this kind of discovery is the object of all social theory and research, he thereby demonstrates something about the orderly structure or organization of social life (Blau and Scott, 1962, p. 1).

The results of this investigation supported the major hypothesis under consideration and the rationale from which it was derived. From a theoretical standpoint, the verification that faculty members' choice of professional reference group is related to an aspect of organizational behavior, structure of interaction with students, stands as the major finding of the study.

The evidence in support of the hypothesis that choice of students as a professional reference group is related to structurally close interactions with students, and of the hypothesis that choice of students as a professional reference group with regard to teaching activities is related to structurally close interactions with students seems to suggest the fruitfulness of utilizing attraction to organizationally relevant groups as an inroad to the dynamics of organizational behavior and determination of requisite organizational personalities. The strength of the respective correlations, 0.22 and 0.25, which accounted for approximately six percent of the total variance, cannot be considered to have significant practical implications at this time. However, these weak but statistically significant relationships, as Gilford suggests, may have been contaminated by the measurement situation. Further research should confirm or deny this condition.

The confirmation of the sub-hypothesis with regard to teaching activities coupled with the subsequent rejection or rather the untestability of the sub-hypothesis with regard to professional specialization has theoretical import. As reference group theory suggests, the behavioral patterns of individuals, in this case organizational behavior patterns, may include a broad spectrum of behavior. The pattern or style of behavior employed by individuals reflects the unique way each

chooses to cope with an environment composed of varied patterns of expectations and impingements. Within his perceptual field, an individual's reference group(s) act as an anchor which serves as a standard for judgment(s) and conduct(s), as well as social support for living up to these standards. In other words, the individual may have many reference groups, each serving as a standard for requisite role performances. For the organizational analyst, the task is to determine which group(s) act as standards for which behaviors or, as in the case of sub-hypothesis two, which group(s) are not related to specific organizational behaviors.

On a more clinical level, confirmation of the major hypothesis may have implications for practitioners. For the administrative practitioner, the tools seem to provide an additional dimension in structuring an organization which will reflect the desired student-teacher relationships. For the practicing teacher, any empirical evidence which provides insight into the dynamics of the student-teacher relationship has implication for the learning process. However, on the basis of this research, practitioners may imply only general tendencies; any direct application beyond this seems unwarranted.

The supplemental analysis which accompanied the presentation of the major hypothesis did reveal several significant and interesting relationships.

1) There was a statistically significant tendency for females to utilize students as a professional reference with regard to teaching activities to a greater extent than males. This fact may be due to social desirability factors operating within the particular organizations investigated.

2) There was a statistically significant tendency for faculty members with masters degrees to utilize an inner professional reference group with regard to professional specialization to a greater extent than did faculty members with doctors degrees. It would seem natural for faculty members with masters degrees to utilize their immediate educational and hierarchical peers as a reference group for their professional specialization, then once achieving equal educational status, they tend to expand their reference group(s) outside the institution.

3) There was a statistically significant tendency for assistant professors to utilize students as a professional reference group to a greater extent than faculty members with higher faculty rank. It may be that increase in faculty rank is related to the utilization of non-student reference groups. Coupled with the previous findings concerning education and reference group, it might be hypothesized that increased faculty rank is related to the utilization of an inner non-student professional reference group.

4) There was a statistically significant relationship between choice of professional reference group and credit hours taught per semester. As the number of credit hours taught increased, faculty members were more likely to utilize students as a professional reference group. This relationship may be due to the increased association with students. As the number of credit hours taught increases, one would suspect associations with students to increase while associations with colleagues decrease.

5) There was a statistically significant tendency for faculty members teaching in the behavioral sciences to utilize students as a professional reference group to a greater extent than faculty members who teach the physical sciences. It may be that the behavioral sciences utilize more subjective measures than do the physical sciences, thus the tendency to incorporate students as a reference group both in terms of content and process.

The major implication of this investigation lies not so much in the hypotheses which were confirmed, but in establishing initial relationships between organizationally relevant reference groups and organizational role performances. In the final analysis, the value of this study will be determined by the extent to which these constructs and findings stimulate further research in the area.

Recommendations for Further Research

One of the most important characteristics of a research study is the additional questions that it generates. As in the case of most research, this study generated more questions than it answered. The following represents a few of the research topics which may be derived from this investigation.

1) Additional research must be conducted to substantiate the validity of the results of this study. A similar study with improved instrumentation seems warranted.

2) What cause and effect relationship exists between the two response variables utilized in this investigation?

3) What other organizationally relevant reference groups relate

to organizational role performance(s)? What role performance(s)?

4) What relationship does professional reference group have to influence within the institution?

5) Does choice of professional reference group bear any relationship to degree of participation (activity) in the organization?

6) How does choice of professional reference group(s) for various role activities relate to the use of formal rules and regulations (rule tropism)?

7) How does choice of professional reference group relate to faculty cohesiveness?

8) How does choice of professional reference group relate to organizational loyalty?

9) How does choice of professional reference group relate to commitment to professional skills (the extent to which an individual is committed to a set of specialized skills)?

10) Is choice of professional reference group related to faculty militancy?

11) How does choice of professional reference group relate to organizational advancement (promotability)?

12) Is choice of professional reference group related to professional isolationism within the organization?

13) How does choice of professional reference group relate to mobility among faculty?

Subsequent research regarding the professional reference groups of faculty members needs to be conducted with rigorous controls, as well as with more refined technology. The conduct of such studies would

require the further development of a taxonomy of professional reference groups and a more detailed delineation of the various roles of faculty members.

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APPENDIX A

PROFESSIONAL ORIENTATION INVENTORY

PROFESSIONAL ORIENTATION INVENTORY

Instructions:

This inventory consists of statements designed to sample the extent to which individuals want support and agreement from different kinds of groups. What is wanted is your honest reaction to each statement. Think in terms of your general orientation rather than specific situations.

Read each statement carefully and circle the response which is most indicative of your choice. Your responses will remain strictly confidential and no institution(s) or individual(s) will be named in the report of this study. Please respond to every item.

S = Students
C = Teaching Colleagues at This Institution
A = Administrators at This Institution
P = Professional Associates Outside This Institution

1. To discuss issues in my professional area, I prefer to get together with ..... S C A P

2. With regard to evaluation of my teaching, I place the greatest importance on the opinion of ..... S C A P

3. With regard to my philosophy of teaching, I place the most value on support from ..... S C A P

4. With regard to the goals and objectives of my classes, I place the most value on the opinion of ..... S C A P

5. With regard to my professional role, I place the greatest importance on the opinion of ..... S C A P

6. With regard to the content of my courses, I place the most value on the opinion of ..... S C A P

7. With regard to my grading procedure, I place the most value on the opinion of ..... S C A P

8. With regard to my instructional technique, I place the most value on input from ..... S C A P

9. With regard to my professional decision making, I place the greatest value on the judgment of ..... S C A P

10. With regard to my test construction, I place the most value on support from ..... S C A P

11. With regard to curriculum development in my professional area, I place the greatest importance on the opinion of ..... S C A P

Professional Orientation Inventory
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S = Students
C = Teaching Colleagues at This Institution
A = Administrators at This Institution
P = Professional Associates Outside This Institution

12. With regard to my professional competence, I place the most value on the opinion of ..... S C A P

13. With regard to the format of my classes, I place the most value on input from ..... S C A P

14. Concerning issues in my professional area, I am most influenced by the opinion of ..... S C A P

15. I am more comfortable about changing my teaching when I sense the approval of ..... S C A P

16. With regard to the direction of my professional career, I place the most value on the opinion of ..... S C A P

17. With regard to my professional accomplishments, I place the greatest value on recognition from ..... S C A P

18. I am comfortable in my professional role performance when I sense support from ..... S C A P

19. Generally speaking, I prefer to identify myself with.. S C A P

20. With regard to the practicality of my teaching, I place the greatest importance on the opinion of ..... S C A P

Key to the Categorical Breakdown of the Professional Orientation Inventory

Professional reference group is measured by the item corresponding to the following numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18.

Professional reference group with regard to professional specialization is measured by the items corresponding to the following numbers: 1, 5, 9, 11, 12, 14, 16, 17, and 18.

Professional reference group with regard to teaching activities is measured by the items corresponding to the following numbers: 2, 3, 4, 6, 7, 8, 10, 13, and 15.

Questions 19 and 20 are filler items; they are not scored.

Scoring the Professional Orientation Inventory

The Professional Orientation Inventory yields nominal data. Responses in each reference category are tallied vertically for each sub-scale, and the total scale. The category receiving a plurality of tallies is designated as the reference group for that scale.

APPENDIX B

TEACHER INTERACTION INVENTORY

TEACHER INTERACTION INVENTORY

Instructions:

This inventory consists of statements designed to sample selected aspects of faculty-student interaction. Read each statement carefully, then indicate your response by marking the appropriate response to the right of each item.

Your response will remain confidential, and no individual or institution will be named in the report of this study.

N = Never
R = Rarely
S = Sometimes
O = Often
VF = Very Frequently

1.	I eat lunch with students	N	R	S	O	VF
2.	Students are invited to have coffee with me	N	R	S	O	VF
3.	My leisure time activities include participation with students	N	R	S	O	VF
4.	I have close social relationships with students ...	N	R	S	O	VF
5.	I associate with students outside the educational setting	N	R	S	O	VF
6.	My conferences with students are pre-arranged	N	R	S	O	VF
7.	I joke with students	N	R	S	O	VF
8.	Students are invited to my home for a class	N	R	S	O	VF
9.	My conferences with students are structured beforehand	N	R	S	O	VF
10.	There is a feeling of "let's get things done" in my conferences with students	N	R	S	O	VF
11.	I avoid student interactions which are not educationally oriented	N	R	S	O	VF
12.	I disregard organizational rules in my dealings with students	N	R	S	O	VF
13.	I chat socially with students	N	R	S	O	VF
14.	I interrupt my conferences with students for phone calls	N	R	S	O	VF

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N = Never
R = Rarely
S = Sometimes
O = Often
VF = Very Frequently

15. Students are entertained in my home ..... N R S O VF

16. I make a conscious effort to remain impersonal toward students ..... N R S O VF

17. I take the initiative in terminating conferences with students ..... N R S O VF

18. Students relate to me on a first name basis ..... N R S O VF

19. When students arrive for conferences, I greet them at my door ..... N R S O VF

20. I make an effort to reduce the interaction distance in my conferences with students ..... N R S O VF

INFORMATION SHEET

Instructions:

Please complete this form by checking the appropriate answers and filling in blanks where indicated.

1. Sex:
   ( ) male ( ) female

2. Education:
   ( ) Baccalaureate Degree
   ( ) Masters Degree
   ( ) Sixth Year Degree
   ( ) Doctorate

3. Faculty Rank:
   ( ) Lecturer or Instructor
   ( ) Assistant Professor
   ( ) Associate Provessor
   ( ) Professor
   ( ) Other

4. Age: _____.

5. Number of years teaching at present institution (including this year):_____.

6. Total number of years teaching in higher education (including this year):_____.

7. Total number of credit hours teaching this semester:_____.

8. Teaching Specialty:_____.

Scoring the Teacher Interaction Inventory

The Teacher Interaction Inventory yields high ordinal data. The responses of the various items are scored on a scale from one to five: never = 1, rarely = 2, sometimes = 3, often = 4, and very frequently = 5. Each individual's score is computed by adding his item scores.

Items 6, 9, 10, 11, 14, 16, and 17 are scored negatively, and all others are scored as shown above.

APPENDIX C

LETTERS

Oklahoma State University

DEPARTMENT OF EDUCATION

STILLWATER, OKLAHOMA 74074
GUNDERSEN HALL
(405) 372-6211, EXT. 6461

I am conducting a Research Project sponsored by the Oklahoma State University Research Foundation. The project sample has been drawn from the faculty members at Oklahoma State University and the University of Oklahoma. It is designed to assess selected dimensions of faculty student interactions, and the professional orientations of faculty.

You are one of two-hundred ten faculty members selected at random from the academic population of the universities to participate in the investigation. Let me assure you that your responses will remain strictly confidential and no institution(s) or individual(s) will be named in the report of this study. The number placed on your questionnaire is simply to allow me to know whose response has been received, and to allow me to remind and encourage those who forget or misplace the instruments.

Please find enclosed copies of the documents which I hope you will complete and return to me via the enclosed self-addressed envelope. The complete process should require less than 15 minutes.

Your cooperation is greatly appreciated.

Sincerely,

James B. Appleberry
Associate Professor

P.S. Should you desire an abstract of the results of this investigation, please indicate below and return this letter along with the instruments.

ABSTRACT REQUESTED....._____

Oklahoma State University
DEPARTMENT OF EDUCATION

STILLWATER, OKLAHOMA 74074
GUNDERSEN HALL
(405) 372-6211, EXT. 6461

A short time ago, I mailed you a packet of materials which I asked you to complete and return to me. I have not yet received your response and am sending you another packet in the event that you have mislaid the original one.

In order to assure you that your response will remain absolutely anonymous, the code number has been eliminated from your questionnaires, and you will receive no further communications concerning this research.

Would you please take time now to respond to the enclosed documents and return them to me in the enclosed envelope? It should take you less than 15 minutes.

Thank you in advance for your cooperation in this research.

Sincerely,

James B. Appleberry
Associate Professor

P.S. If you have already forwarded your response, please disregard this letter.

VITA

William Earl Hodges

Candidate for the Degree of

Doctor of Education

Thesis: FACULTY REFERENCE GROUPS AND STRUCTURAL INTERACTION TOWARD STUDENTS: A STUDY OF RELATIONSHIPS

Major Field: Educational Administration

Biographical:

Personal Data: Born in Blackwell, Oklahoma, May 26, 1941, the son of Mr. and Mrs. William Ellis Hodges.

Education: Attended elementary schools at Blackwell, Oklahoma; graduated from Blackwell High School, Blackwell, Oklahoma, in 1959; received a Bachelor of Science in Education from Central State University, Edmond, Oklahoma, with a major in Health and Physical Education and a minor in Mathematics in May, 1964; received a Master of Teaching in Education degree from Central State University, Edmond, Oklahoma, in July, 1967; completed the requirements for the Doctor of Education degree at Oklahoma State University, Stillwater, Oklahoma, in May, 1973.

Professional Experience: Teacher of mathematics at Duncan Junior High School, Duncan, Oklahoma, 1964-65; teacher of mathematics at Star Spencer Junior-Senior High School, Oklahoma City, Oklahoma, 1965-66; guidance supervisor, Bureau of Indian Affairs at Toadlena, New Mexico, 1966-67; teacher of mathematics at Washington Junior High School, Albuquerque, New Mexico, 1967-68; teacher of mathematics at Hoover Junior High School, Oklahoma City, Oklahoma, 1968-69; guidance counselor, Harding Junior High School, Oklahoma City, Oklahoma, 1969-70; assistant principal, Harding Junior High School, Oklahoma City, Oklahoma, 1970-71; graduate assistant in the College of Education, Oklahoma State University, Stillwater, Oklahoma, 1971-present.